FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

Volume 24—Number 47 | In Two Sections | NOVEMBER 22, 1952 | Section One | 1 Year $4, 2 Years $7

Little Change Likely in Farm Program

OPS Hikes Linseed Oil Meal Ceilings $2 at Six Points

WASHINGTON — The Office of Price Stabilization has increased differentials between the Minneapolis base ceiling price for flaxseed feed products and ceilings for processors at six other points of production by $2 a ton.

The six areas are Cleveland, Buffalo, New York Harbor, Philadelphia and Emporia and Fredonia, Kansas.

OPS said additional data in regard to historical price relationships among the various points of production indicated that the original differentials were inadequate.

The increase, effective Nov. 26, was authorized in Amendment 4, Revision 1, Supplementary Regulation 95, General Ceiling Price Regulation.

The price agency estimated that the adjustment made by the amendment would apply to less than one fifth of the total production of flaxseed feed products.

The linseed meal ceiling at Minneapolis for processors is $78 ton, bulk. The new meal ceilings for the base points affected by Amendment 4 are $85.50 ton, bulk, at Cleveland, Emporia and Fredonia and Buffalo and $87.50 for the New York Harbor area and Philadelphia.

The ceilings on other flaxseed feed products at these points also were raised by $2.

MINNESOTA HATCHERY CONVENTION PLANNED

LITCHFIELD, MINN. — The 25th annual convention of the Minnesota Poultry Hatchery Assn. will be held Dec. 2-4 at Hotel Radisson in Minneapolis.

An invitation to all hatchery owners, employees, turkey growers and anyone else interested in the hatchery and poultry business to attend the convention has been issued by L. L. Baumgartner, secretary of the organization.

EISENHOWER'S ADMINISTRATION COMMITTED TO HIGH SUPPORTS

Industry Leaders Who Expect Radical Changes Are Reminded That Most Policies of Past 20 Years Had Bi-Partisan Backing

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—To many executives in industry the Eisenhower victory in the November election appears to have been like a heady wine, promising to wipe out much if not all of the changes which were wrought in our agricultural economic life during 20 years under Democratic administrations.

A more sober view is recommended.

Reports indicate that many industry executives believe that the new administration will move abruptly to end the price support program for agricultural commodities, soil conservation programs and in effect restore agriculture to a laissez-faire economic status.

To observers here those who harbor such ideas may be in for a rude awakening.

First, it must be remembered that Gen. Eisenhower in his campaign speech in Minnesota on the Republican farm platform said without qualification that he would support the 90% price support program enacted by the 82nd Congress for basic commodities. It would be an outright repudiation of this statement if he were to sponsor any radical change in the farm program.

Second, it must be remembered that the farm programs enacted during the past 20 years have been in more recent times supported by bipartisan blocs in both chambers of Congress.

To anticipate the agricultural law activities of the new administration one must first appraise the composition of the new congressional committees. In the Senate the agricultural committee will be undoubtedly led by George D. Aiken, (R., Vt.) while the former chairman, Allen J. Ellender, Jr. (D., La.) steps down to the post of ranking minority member.

Sen. Aiken reflects the more moderate price level support advocate. He appears to see in the high or 90% support line a policy which eventually will bring the support program into disrepute since it embraces severe inequities among agricultural commodities and in other instances establishes domestic price levels which in turn promote competitive agricultural production of those high-level supported commodities in other areas of the world.

The Aiken price support theory—erroneously called the sliding scale support program—is in effect an escalator method of support wherein

(Continued on page 48)

FEEDSTUFFS FEATURES

Handling the Credit Problem 18
Practical Public Relations 24
Watch Your "Acid Test Ratio" ...32
Putting Feed Research to Work ...38
Joe Brooks 30
Convention Calendar 12
Feed Markets in Detail 46
Classified Ads 42
Index to Advertisers 51

Production School Students Get Carlot Quantities of Information

KANSAS CITY—A capacity crowd of feed men got a well blended, packaged and delivered batch of production advice this week at the third annual Feed Milling Production School in Kansas City.

The school, held Nov. 17-19 at the President Hotel, was sponsored by the Midwest Feed Manufacturers Assn.

The students—including mill managers and superintendents and other executives and supervisory personnel from all parts of the country—filled the hotel ballroom "class room" for the intensive three-day program of talks and discussions by feed production experts and allied trades representatives.

(Reports on the talks will appear in next week's issue of Feedstuffs.)

Interest in the school ran high as indicated by the capacity attendance, note-taking and many questions asked of speakers and equipment and packaging men and others at the night sessions.

Most of the speakers were production executives from feed companies. Also included were college men, a consultant, representatives of construction and molasses companies and others. The panels of experts for the question-and-answer sessions also included representatives of equipment, bag and other companies. It was estimated that more than 300 questions were asked by the students.

Virtually every phase of feed production was covered during the meeting, including ingredient handling, grinding, mixing, pelleting, crumblizing, packaging and shipment and delivery.

Among the topics in which considerable interest was shown were production costs, pelleting and crumblizing, packaging, bulk delivery, molasses handling, personnel training and supervision, equipment use and others.

Guy L. Cooper, Jr., the O. A. Cooper Co., Humboldt, Neb., president of the Midwest association, called the school an "unparalleled example of American democracy in action," providing feed men with an opportunity to learn how to do their jobs better through an exchange of ideas which would enable them to become more valuable to their companies and their industry.

James H. Burrell, consultant, St. Louis, one of the speakers and school principal, said he knew of no organization other than the Midwest association which has thought of or car-

(Continued on page 8)

ADA Convention Plans Set; Record Attendance Expected

KANSAS CITY—Early indications point to a new record attendance at the eleventh annual convention of the American Dehydrators Assn. in Arizona next Jan. 11-14. Lloyd S. Larson, secretary of the association, also indicated the program will be tops from the standpoint of both business and entertainment.

The unique plan of having the convention in the Valley of the Sun during the Arizona winter vacation season is appealing to members and allied trades of the alfalfa industry and interest in attending has been running high ever since the location was announced. Four exclusive re-

(Continued on page 48)

Special Alfalfa Section

This issue of Feedstuffs contains a special section which tells the story of alfalfa from seed to feed. The section begins after page 26. Pictures and articles explain the dehydrated alfalfa meal production process and the various influences and factors affecting quality, supplies and prices. Information on American Dehydrators Assn. research projects and the values and use of alfalfa meal also is included in the special section. Because of the extensive information in the section, many readers undoubtedly will want to preserve it for future reference.

★ FEEDSTUFFS ★

A Weekly Newspaper Published by
THE MILLER PUBLISHING CO., 118 SO. 6TH ST., MINNEAPOLIS 2, MINN.
(Telephone: Main 0575. All Offices Serviced by Bell System Teletype)

EDITORIAL STAFF—Harvey E. Yantis, Editor; Carroll K. Michener, Executive Editor; Milton B. Kihlstrum, Managing Editor; Martin E. Newell, Paul L. Dittemore, Associate Editors; Roger Bergland, News Editor; George L. Gates, Market Editor; Frank W. Cooley, Jr., Donald Neth, Editorial Assistants.

WASHINGTON REPRESENTATIVE—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 8534.

BUSINESS STAFF—H. J. Pattridge, President and Treasurer; Carroll K. Michener, Vice President; Wayne G. Martin, Jr., Vice President; Harvey E. Yantis, Secretary; Thomas A. Griffin, Business Manager; Wilfred E. Lingren, Advertising Sales Executive; Edwin J. Hartwick, Circulation Manager; James G. Pattridge, Assistant Treasurer; Carl R. Vetter, Advertising Production Manager.

BRANCH OFFICES—SOUTHWEST, Martin E. Newell, Manager, James W. Miller, Business and Editorial Assistant, 614 Board of Trade Building, Kansas City 6, Mo. (Tel. Victor 1330); EASTERN STATES, Wayne G. Martin, Jr., Manager, George W. Potts, Assistant Manager, 114 E. 40th Street, New York 16, N. Y. (Tel. Murray Hill 3-3768); CENTRAL STATES, Don E. Rogers, Manager, Henry S. French, Business and Editorial Assistant, 2272 Board of Trade Bldg., 141 W. Jackson Blvd., Chicago 4, Ill. (Tel. Harrison 7-6782); FOREIGN (Canada and Europe), George E. Swarbreck, Manager, 901 Lumsden Bldg., Toronto 1, Ont. (Tel. Empire 4-5654).

Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager Feedstuffs, Minneapolis 2, Minn. Single copies 20c. Subscription rates: One year $4, two years $7, in the U. S., U. S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Change of Address—Readers are urged to give prompt notice and to anticipate change in near future by two weeks' advance notice. Ask postman for form 22-S to advise of this change. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized.

Entered as second-class matter Feb. 25, 1947, at the post office at Minneapolis, Minn., under the Act of Mar. 3, 1879

The controlled circulation of this issue is concentrated in the southeastern states

Minneapolis, Minn., U.S.A., November 22, 1952

Alfalfa Story Continued

A YEAR ago Feedstuffs published a 48-page special section devoted to dehydrated alfalfa meal, its production and utilization. It was an exceptionally informative compilation about a great product and a growing, progressive industry. The subject is of particular importance to feed men, inasmuch as almost all of the dehydrated alfalfa meal produced is used in formula feed, and the interests of the two industries are largely identical.

The response we had from that project of a year ago caused the editors of Feedstuffs to want to continue the effort in order to tell more of the story. In this desire we again were joined by industry leaders and research men, without whose aid the accomplishment would be difficult. The result is presented to our readers in another special section of this issue of Feedstuffs. As was the first one, it is so made up that it can be preserved for useful reference.

In the 1951 section, emphasis was placed on the development of an outstanding research program by the 10-year-old American Dehydrators Assn. The remarkable nutritional values in dehydrated alfalfa meal and the utilization of the product in various types of rations was the principal theme.

The content of the 1952 section brings up to date the continuing research program, but a principal purpose of the editors this year has been to explain and portray the many influences and factors that affect the quality, the nutritive values and the supply and price of dehydrated alfalfa meal. The importance of this presentation to buyers and users of alfalfa meal is obvious. Although alfalfa is a hardy plant, a lot of things can happen to it between the time it is seeded and the time it is incorporated into a formula feed. The use of certified seed of improved varieties, the acreage, cultural practices, plant disease and insect infestations, the weather—all of these and more are a part of the story of getting a supply of uniform, high quality dehydrated alfalfa meal into a formula feed ration. The dehydration process itself and the handling of the meal from harvesting through distribution to the feed manufacturer have tremendous influence on the value of the final product. All of these factors should be thoroughly understood by a buyer and each step seen in its proper sequence and importance in order to evaluate the developments of a season as they occur.

★ ★ ★

THE story of this crop from seed to feed and of the influences that make any particular year a good, bad or average one from a standpoint of alfalfa meal supply, lends itself particularly well to pictorial treatment and, to a considerable degree, that is the way it is told. More than 100 photos, most of them taken in the field especially for this Feedstuffs' presentation, illustrate the sequence of important developments in the production of dehydrated alfalfa meal. We believe this liberal use of selected pictures will enable readers to visualize the industry and its problems much more clearly than would be possible with text alone.

Alfalfa production has doubled in the past quarter century. Most of the increase has resulted from additional acreage, although there has been an increase in yield per acre of about 12%. These increases have been the result of the growing recognition of the values in alfalfa—and particularly alfalfa meal—by feeders and the feed industry. They have been accomplished by capitalizing on our natural resources through research, and by the ingenuity and energy of those engaged in the production and distribution of the product in any of its phases.

There are many problems left, as a study of the 1952 special alfalfa section of Feedstuffs will show. Many diseases and parasites are to be conquered. There still is a loss in nutrient value of alfalfa between cutting and consumption estimated to be about 20%, which is equivalent to more than $150 million at current prices.

But progress has been made and is continuing. The manufacture of dehydrated alfalfa meal has become a great industry, of tremendous importance to formula feed manufacturers and to feeders. We have enjoyed telling the story, and we are certain that our readers will benefit by studying it.

CONSTRUCTION MAN KILLED

JETMORE, KANSAS—A construction worker fell to his death recently while working on the inside of a 100-ft. storage tank being built by Chalmers & Borton Co., Hutchinson, for the Farmers Cooperative Co. The worker, Fitchue James, 39, was one of a crew removing paint from a steel ladder on the inside of the tank. He fell approximately 80 feet to the floor.

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

Continued mild weather over most of the nation held expansion of formula feed business in check this week, although there were some signs that dealers were becoming more interested in building stocks because of steadier prices. Demand from feeders, meanwhile, has not expanded greatly, although the situation appeared more promising in some areas. Liquidation of stock in drouth areas continues as a major obstacle to future trade. An upturn in broiler feed business is anticipated by some feed men later on. Most reports indicate that cold weather and snow could boost volume substantially in a hurry. The index of wholesale feedstuffs prices advanced .8 point to 263.2 and the feed grain index moved up 4.3 points to 229.6 in the week ending Nov. 19. (Ingredient details on pages 45-47.)

Southwest

The trend in southwestern feed production was lower this week. Demand for hog and poultry feed was slow to fair. Broiler feed demand was fair, and there continued to be a fairly good demand for dairy cattle feed.

However, in the range cattle feed field where many mills were depending on shipping instructions and a good number of new orders for needed extra running time, demand was beginning to slacken. Some cancellations were reported and shifting from higher proteins to a 20% type feed was a frequent request.

Thus November was shaping into a slower month for feed business in this area, compared with October and with November a year ago. The long drouth with its shortages of hay and water, sluggish markets for pork and other meats, considerable liquidation of laying flocks or lighter replacements and higher costs of labor and distribution have contributed to a more difficult period in which to sell feed. Another general factor is the change in government administration and the watchful waiting of investors in general.

The price trend was unchanged to slightly lower in the Southwest. Corn and millfeed values were less this week, allowing declines of around 50¢ ton on feed costs. Production dropped to a four and a half to five-day average this week with few mills requiring more than five days. Even some of the large cattle feed processors do not need more than five days' operation this week.

Ohio Valley

A slight pickup in formula feed sales was noted this week in the Ohio Valley, and most manufacturers believe a better trend in businesss is developing. One reason advanced for this belief is that many farmers are coming around to the conclusion that prices of feeds are now touching bottom and are likely to begin advancing in line with stiffening prices for some ingredients.

This situation was said to have been reflected this week in more sizable orders from retailers who are building up their inventories after having maintained them at low levels during recent months. This seems the logical thing to do, in view of the widespread destruction of pasturage throughout the valley by early freezes and forest fires, plus the certainty that feedings of fall farm crops cannot be continued indefinitely.

The most important single element affecting sales at this time of the year is the weather. Unseasonable summer weather, with temperatures in the high 70's, has prevailed in this area during the last week, but it is not to be expected this will continue much longer. Just a few days of sub-freezing temperatures will have a definitely favorable effect on formula feed sales throughout the valley.

Prices remained firm this week, with slight advances reported for some formula feeds. The only present shadow clouding the picture is the continued possibility of a prolonged coal strike, which, should it develop, could indirectly hamper the feedstuffs market by throwing thousands out of work and thus bring about a decline in retail food sales.

But even that gloomy prospect is not too discouraging, because present large farm herds and flocks must be fed regardless of the retail food situation, and this requirement, it is believed, will still be the major factor leading to improved formula feed business during the weeks ahead.

Northwest

Formula feed business this week in the Northwest held to about the same volume as in the previous week, although there was some shifting of demand for different types of feed. Some manufacturers, however, reported lighter sales.

Feed for cattle continued to get the biggest play, although there was some tapering off in this demand. Dairy feed trade was moderate to very good among the various concerns. Beef cattle feed interest may be off somewhat, some manufacturers said, because of heavy shipments during October and continued mild weather since.

Poultry feed sales appear to have picked up somewhat, although continuation of open weather has slowed this trade from seasonal expectations. In general, poultry feed business is running behind last year while cattle feed volume is ahead of last year. Hog feed sales are rather light.

Some manufacturers noted greater interest in carlot buying among dealers and a tapering off in truck lot sales, indicating to them that dealers are more convinced of market stability and want to build up their inventories.

Operating schedules this week included three shifts for four days and two shifts for five days. Some plants planned to add a third shift next week.

Central States

Not much change in the general picture is reported by formula feed manufacturers in the central states area this week. Sales are not unusually fast, but neither are they dragging. Plants report an order backlog of two to three days, working on a five-day week with two eight-hour shifts. However, there is no overtime being worked.

Cattle feed is coming into its own, and that is tending to replace somewhat the decline in turkey feed business, which is falling off sharply as the Thanksgiving birds find their way to market. However, the turkey market is far from satisfactory, averaging around 31¢ for toms and 36¢ for hens. This is around 5¢ below a year ago, so this discourages feeding to a degree.

Broiler feeds are not moving in great volume because of a cutback in the number of birds being fed. However, a good market exists for

(Continued on page 50)

What does DIXIE mean to you?

A profit Making Opportunity

DIXIE A well and favorably known trade mark in manufactured feeds.

DIXIE Forty years of successful feed manufacturing experience.

DIXIE Forty years of growth in a highly competitive industry.

DIXIE A following of feeders who have fed Dixie profitably for years.

DIXIE A line of distinctive feeds scientifically formulated and manufactured of high quality ingredients in modern, efficient mills.

DIXIE Distribution facilities for keeping a balanced Dixie line in retail stock at the dealer's store.

DIXIE A complete line, actively balanced for fast turnover. One dependable source of supply.

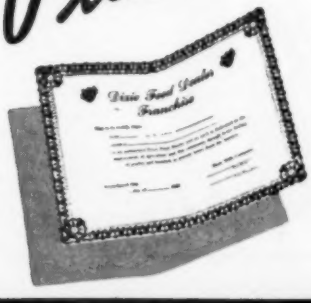
DIXIE A Feeder Advertising Program designed to bring customers into your store.

DIXIE Dixie salesmen to work with you in building profitable tonnage.

DIXIE A Feed Pricing Program that sells.

- Radio Advertising in your territory.
- Newspaper Advertising in your locality.
- Direct Mail Advertising over your store name.
- Strong point-of-sale advertising.
- Attractive Store Identification.
- Truck and sales car identification.

Plus—



The Dixie Exclusive Franchise Dedicating You to Service to Your Community Through "Better Feeds for Better Foods"

Send for complete, specific, information on "What Dixie Means to YOU."

DIXIE MILLS CO.
10th and Walnut
East St. Louis, Illinois.

Please give me complete information on what a Dixie Franchise would mean to me in my territory.

Name_____

Store Name_____

Address_____

DIXIE MILLS COMPANY
10th & WALNUT • EAST ST. LOUIS, ILLINOIS

Western Grain, Feed Group Convention Opens on Nov. 24

DES MOINES — Talks by three farm and industry leaders will feature the opening session of the Western Grain & Feed Assn. convention at Fort Des Moines Hotel here Nov. 24-25.

Clyde Spry, Iowa secretary of agriculture, will open the speakers' program at 10 a.m. Nov. 24, to be followed on the rostrum by William T. Diamond, executive secretary-treasurer of the American Feed Manufacturers Assn., and Ron C. Booth, Piper Grain & Milling Co., Cedar Rapids, president of the Grain & Feed Dealers National Assn.

The afternoon program, starting at 1:30 p.m. includes M. P. Kerr of the Food & Drug Administration, Charles P. Shuman, president of the Illinois Agricultural Assn. and Ray Bowden of Western Grain & Feed Assn., as speakers.

The "Feed Day" program Nov. 25 begins at 9:30 a.m. with outstanding speakers scheduled to discuss poultry, swine and cattle feeding.

Delegates may register Nov. 23 from 4-6 p.m. and again at 8 a.m. Nov. 24. A luncheon and style show for women is set for noon Nov. 24.

The association's nominating committee, composed of Roy Freed, chairman, Hugh Kelley, E. M. Waldron, Carl Orsinger and Don Jorgenson, will meet at 3:30 p.m. Nov. 23 and the resolutions committee gathering is planned for 9:30 a.m. Nov. 24. Chairman of the latter group is Gayle Snedecor and members are Stanley Eales, Ray Fleck, J. A. Gould and Columbus Hayes.

A special feature will be the Nov. 25 luncheon at which 15 Iowa State College staff members are to be honored for outstanding work in nutritional research.

N.W. Feed Group Makes 6th $2,000 Research Grant

MINNEAPOLIS — Announcement of the sixth annual grant of $2,000 for research in poultry nutrition at the University of Minnesota was made at a dinner meeting of the Northwest Feed Manufacturers Assn. at Hotel Radisson Nov. 17.

Dr. H. J. Sloan, head of the university's poultry division, acknowledged the grant and expressed the appreciation of university officials for the feed group's participation in the research program. John W. Zipoy, Pillsbury Mills, Inc., chairman of the association's research fellowship committee, introduced Dr. Sloan.

Ron Kennedy, secretary of the Minneapolis Grain Exchange, speaking on "The Risks of Freedom," told the feed men that the industry they represent has as much at stake in free trade as any business group in the nation. Men who are primarily interesfed in selling should keep in mind the need to "sell the system as well as the product," Mr. Kennedy said.

Social gains made in the U.S. have come as a result of a free, competitive economy, he said. While regulation of business has come to be a part of governmental functions, businessmen should do everything they can to see that price floors and ceilings are kept far enough apart so that prices can fluctuate and maintain a competitive distributing system, he said.

LAKE STATES FEED FIRM FORMED IN MINNEAPOLIS

MINNEAPOLIS — The formation of a jobbing and brokerage firm under the name of Lake States Feed & Grain Co. has been announced by Frank M. Rosekrans, Jr., and Lawrence E. Meyer, partners in the business. Office of the firm is located at 918 Flour Exchange, Minneapolis.

Mr. Rosekrans has been in the feed industry for the past 25 years, starting in association with his father in Chicago in 1927. In addition to experience in the brokerage field, he has operated a jobbing business in Minneapolis and a retail feed store in Wayzata, Minn.

Mr. Meyer has 17 years of country-wide experience as a grain merchandiser with Cargill, Inc., in Minneapolis. He is a member of the Minneapolis Grain Exchange.

NAMED DIRECTOR

NEW YORK—A. Carswell, a vice president and general sales manager of the multiwall bag division, was elected to fill a vacancy on the board at a meeting of directors. Mr. Carswell joined the company in 1928 and was named a vice president in 1949.

Sterwin

Announces a NEW

*SOLUBLE RIBOFLAVIN

*A development of Sterling-Winthrop Research Institute (U. S. Pat. 2,601,569)

STERWIN PRODUCTS FOR THE FEED INDUSTRY

CHOLINE CHLORIDE
RIBOFLAVIN
CALCIUM PANTOTHENATE
NIACIN
THIAMINE HYDROCHLORIDE
PYRIDOXINE
ASCORBIC ACID
BACITRACIN
VITAMIN B12
PENICILLIN
AMINO ACIDS

TRIDEE*—Brand of Vitamin D3. Activated 7-dehydrocholesterol. Supplied in vegetable oil, water dispersible carrier or free-flowing powder form.

"CUSTOM-BLENDED" VITAMIN CONCENTRATES—Any desired vitamins supplied singly or "Custom-Blended" in any combination and potency to meet your requirements.

Soluble Riboflavin—This *NEW* product developed by Sterling-Winthrop Research Institute is simpler to use. You can make highly concentrated solutions (250 times as soluble as crystalline riboflavin). For spraying into your feed. Sterwin Soluble Riboflavin is most economical.

Choline Chloride—Available as a purified, water-white, 70% aqueous solution. Stable, relatively non-corrosive, and easily sprayed into your feed. Also available as a 25% dry powder which is *free flowing* and easily blended in continuous or batch-mix operations.

Tridee (Vitamin D_3) Water-Miscible—Easily dispersed in water for spraying directly into the feed. This is a very convenient way to add this most essential vitamin to your feeds.

Modern Feed Plants find that it pays to spray these vitamins into their feeds because they are so easy, accurate and economical to use.

BLENDING PLANTS: Atlanta, Cincinnati, Kansas City.
Stocks also carried at Dallas, St. Louis, Buffalo, Minneapolis, Los Angeles.

BRANCH OFFICES: Atlanta, Boston, Buffalo, Chicago, Dallas, Kansas City (Mo.), Los Angeles, Minneapolis, Portland (Ore.), St. Louis

Sterwin Chemicals Inc.
Subsidiary of Sterling Drug Inc.
1450 BROADWAY, NEW YORK 18, N. Y.
Pioneers in Food Enrichment

SMALL'S

DEHYDRATED ALFALFA MEALS
Car Lots—Truck Loads

Distributors for
MINNESOTA
NORTH DAKOTA
SOUTH DAKOTA
and Northern WISCONSIN
For Information write

MANEY BROTHERS
MILL & ELEVATOR CO.
MINNEAPOLIS, MINN.

SMALL'S

Our business is service to the feed industry on millfeed—cash or futures—or any other feed ingredient. Call BA 5800. —Jerry Parks

602 Board of Trade Building —— Kansas City, Missouri

just Small things... but worth noting!

Every step of the way, from the field to the finished product, the W. J. Small Company takes extra care to see that the Small Dehydrated Alfalfa Meal delivered to you is packed with extra values.

take *Cold Storage* for example . . .

The quality of Small's Dehydrated Alfalfa Meal is the same in June or January, thanks to the Company's 9 cold storage warehouses with a capacity of 27,000 tons. Here zero temperatures "lock in" all the good things in Small's Dehydrated Alfalfa Meal—all the fresh green color, the carotene, and other valuable nutritive properties.

Cold storage of dehydrated alfalfa meal was pioneered by the W. J. Small Co. in 1940. It has proved to be one of the outstanding contributions to the success of many famous brands of formula feeds. It is another of the "Small" things that assures the feed manufacturer of uniform color and analysis, consistent quality, and never-changing eye appeal in his feeds.

THE W. J. SMALL COMPANY
DIVISION
Archer-Daniels-Midland Company
1200 OAK STREET
KANSAS CITY, MISSOURI

FOR FEEDS WITH A FUTURE

Small's

DEHYDRATED ALFALFA MEAL

Nutrition Developments Discussed at Missouri Feed Short Course

COLUMBIA, MO.—One of the best in the series of annual Animal Feeding Short Courses at the University of Missouri was held Nov. 6-7 in Columbia. Feeders, feed manufacturers and allied tradesmen from the state and surrounding areas attended the two-day meeting.

Dean J. H. Longwell of the school of agriculture welcomed the group and stressed the need for application of up-to-date research on the complex problems of feed formulation. Maximum efficiency and returns from our feed supplies will be necessary to meet the demands of increasing population and to maintain the high standard of human nutrition, he said. More research and funds for research are needed by our colleges, he declared, for dollars spent in research produce a tremendous long-time return.

The challenge which stands before the feed industry was illustrated forcibly by Jack D. Dean, executive vice president of the Midwest Feed Manufacturers Assn., Kansas City. A tremendous field for expansion still lies ahead, Mr. Dean declared, for if the best practices of formula feed usage were undertaken by feeders of all livestock and poultry in the U.S. required by our economy, there is a potential need for 150 million tons of formula feed annually. At the present time the rate is around 35 million tons.

He also pointed out that much of the increased demand for human food in the next 25 years can be met through increased feed efficiency. However, feedmen must also be servicemen, for the industry must be familiar with the problems of the feeder and must be cognizant of the latest in research and information produced by work in agricultural colleges and private industry.

The purpose of feed control work is to maintain high standards of product and merchandising in the feed industry, Earl Straub, head of the feed control division of the state department of agriculture, Jefferson City, said. To check for honest labeling on feed tags is the main function of the division. In this regard, only a minor percentage of the tags are improperly labeled, Mr. Straub declared.

Economic Outlook

Due to the general drouth condition in the Midwest and Southwest, feed supplies and price trends at the present time are receiving widespread attention. These points were discussed by Gordon Nance, extension professor of agricultural economics of Missouri. Prof. Nance reported markets were within 6% of the all-time high in prices, and that we got in this position due to war production and scarcity of consumer goods, and that a continued mild inflation should be expected for 6 to 12 months with no great decline in prices the next two years. Prof. Nance expects higher hog, egg and milk prices and lower beef cattle values in the year ahead.

Feed prices should average the same or slightly higher than the past year. Roughages will be higher but grains lower. Although price ceilings on protein supplements have been raised, the speaker does not expect actual prices will be any higher than they were earlier in the year when ceilings were exceeded through selling of protein mixes.

Feed manufacturers must sell feeders important supplementary items for the livestock and poultry diet, not an abundance of what is already obtainable on the farm, Dr. W. H. Pfander of the animal husbandry department said. Crude fiber, he said, is not an essential food nutrient and has little place in the commercial feed bag. Each 1% increase in crude fiber results in a 2½% decrease in food value, Dr. Pfander added. Only ruminants can use any quantity of fiber to an advantage. One of the best sources of fiber is corn cobs in the form of silage. However, crushed cobs, straw and low quality roughages high in fiber need to be supplemented with natural proteins and vitamin A. Up to 25% of the protein needs can be supplemented as urea if properly used, he said.

Amino Acids

Dr. A. G. Hogan, professor of animal nutrition of the Missouri college, visualized the next big surge in nutritional research as in the field of amino acids. Dr. Hogan was not sure that there were any unrecognized vitamins of major importance but was of the opinion that recent discoveries in vitamins and antibiotics had cleared the field for better work on amino acids.

The following guides are important to keep in mind in formulation of poultry rations:

(1) National Research Council recommendations.

(2) Protein in excess of needs is expensive and wasted.

(3) Quality of protein, especially in reference to such amino acids as methionine and lysine have a marked effect on growth rate.

(4) Correct combination of several protein supplements can give proper balance of amino acid.

(5) Inorganic phosphorus should make up two thirds of total phosphorus in chick and poultry rations. A level of .4% inorganic phosphorus in ration is satisfactory.

(6) Dry "vitamin D" gives better results than codliver oil in preventing enlarged hocks in turkeys.

(7) Effect of manganese in control of perosis is overemphasized. Vitamins play a great part.

(8) Vitamins A, D, G, and B_{12} are those needing greatest attention in poultry rations.

(9) Antibiotics apparently prevent low grade infection and thereby accelerate early growth rate.

The idea that high protein level rations improved the production of meat strain hens was debunked by Prof. Q. B. Kinder of the poultry department. Citing recent research work from New Hampshire and Missouri, Prof. Kinder indicated that a 15% protein level in the entire ration for laying hens was adequate in all except the highest producing strains. The eggs must be bred into the birds and protein above the needs for production won't push the eggs out. In regard to high energy rations for layers, he stated that present research indicated some slight increase in production and a slight decrease in feed per dozen eggs. This was not enough to make much difference in the feed cost per dozen eggs as the high energy laying ration was more expensive. Prof. Kinder believes there may be more trouble with feather picking and cannibalism on high energy rations unless preventive measures such as no-pick devices can be used.

Broiler Rations

Recent experiments in broiler rations indicate that a reduction of the total salt in the ration to a .6% level will improve litter dryness and management without a decrease in growth rate. Prof. Kinder also stated that high energy-all vegetable protein rations supplemented with proper minerals, vitamins A, D, G, and B_{12}, and antibiotics were producing broilers at the cheapest feed cost per pound of gain in his experiments. Reduction of the protein level from 20% to 16% after eight weeks further decreased

DEVOLD *VITAMIN* OILS...

A Credit to any Feed!

Used With Confidence by Feed Millers and Animal Breeders for Nearly 30 Years

Quality • Tested • Fresh • Low F. F. A. Content

—All Potencies—

➔ **DEVOLD VITAMIN A & D FEEDING OILS**

➔ **"DEVOLKOD®" VITAMIN OILS**
(Cod Liver Oils with added Vitamins A & D)

➔ **"DEVOLKOD®" NON-DESTEARINATED COD LIVER OILS USP**

➔ **DEVOLD VITAMIN A OILS**

➔ **PEDER DEVOLD WHEAT GERM OIL**

Let Us Quote You!

PEDER DEVOLD OIL COMPANY
Div. Chas. L. Huisking Co., Inc.
45-FM Clinton Avenue Brooklyn 5, N. Y.

SEE
E. A. HOGAN CO.
PRICE CARD
Page 47

ANOTHER REASON FOR "JAY BEE" SUPERIORITY

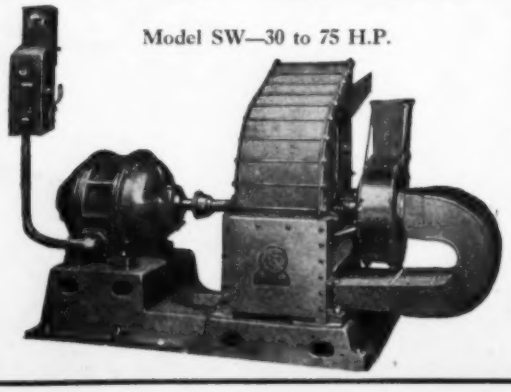
Laboratory tests prove that "Jay Bee" ground feeds retain more *AMINO ACIDS*, vital for proper animal nutrition.

Why Not Make Better Feeds With "JAY BEE"

Write for Full Information

J. B. SEDBERRY, Inc.
FRANKLIN, TENN.

Model SW—30 to 75 H.P.



If you grind feeds, you need a "JAY BEE"

There is a size and model for every requirement

Belt, V-Belt and Direct Drive Mills—
5 to 200 H. P.

SHORT COURSE STAFF—Among the speakers at the annual Missouri Animal Feeding Short Course held at the University of Missouri, Columbia, Nov. 6-7 were (left to right) Dr. M. E. Taylor, department of veterinary medicine; Dr. W. H. Pfander, department of animal husbandry; Dr. C. W. Turner, department of dairy husbandry; Dr. J. F. Lasley, department of animal husbandry; Dr. A. J. Dyer, department of animal husbandry, and Prof. Q. B. Kinder, department of poultry husbandry.

cost and gave a better finish to the birds.

Dr. C. W. Turner of the dairy department, recently returned from Australia, reviewed the present role of hormones in animal feeding. Dr. Turner stated that the rate of hormone secretion in animals was an inherited characteristic but it also is influenced by environmental factors such as heat, light and nutrition level. We should be aware of the fact that thyroid secretion rate affects rate of growth and production, he said.

High thyroxin secretion stimulates growth, whereas a low rate of secretion causes fattening. Dr. Turner stated that thyroxin was being used successfully to maintain the milk secretion rate, especially in warm weather. Experimentally, by using diethylstilbesterol and progesterone, dry cows have been stimulated into production up to 40 to 80 lb. a day. Diethylstilbesterol is also being used to chemically caponize poultry.

Special attention must be given this year to the wintering of the beef breeding herd, according to Dr. A. J. Dyer of the animal husbandry department. Herdsmen who can supply 5 lb. legume hay and 15 lb. low quality roughages plus 1½ to 2 lb. 40% protein supplement per cow the last 150 days of gestation will come through in best shape. If legume hay is not available, they should guard against vitamin A and phosphorus deficiencies. A mixture of equal parts of salt and bone meal self-fed will supply the phosphorus and one ounce of a dry vitamin A concentrate to each 4 lb. of this mix will provide all the needed "A." If roughage prices and quality get too far out of line, then concentrates are the better buy. Some urea can be used for protein supplement but it is toxic if poorly mixed or fed at high levels, leaves a rough coat and does not add any energy value to the ration. Pregnant ewes need even more careful feeding than beef cows, says Dr. Dyer, as the reproductive load proportionately is about twice that of the cow.

Commercial manufacturers are producing some excellent calf meals, according to Dr. Harry Herman of the dairy department. Good calf raising still requires the use of 250 to 400 lb. whole milk during the first eight weeks along with a good feed supplement. Once frowned upon, the nurse cow idea appears to have a place on some farms. Good calf raising starts with the dry cow, said Dr. Herman; one pound of feed to the dry cow is worth 2 lb. to a fresh cow. By culling calves from inferior cows, we can start less calves and feed the extra feed to them.

Clean stalls for calving, clean udders, iodine on the navel and plenty of colostrum milk from the cow will eliminate 75% of the death loss in calves. Extra colostrum milk can be frozen and fed for several weeks to weak calves. Antibiotics give about 12% faster growth rate up to 14-16 weeks but are of no value thereafter at a feeding level of 2 grams per 100 lb. feed. Aureomycin was used in the Missouri experiments. "Cud inoculation" from healthy cows mixed in the milk of the calves may be of value especially where the calves are raised apart from the cows.

Feeding Brood Sows

Experiments on feeding brood sows have not received the attention they should have, according to Dr. J. F. Lasley, associate professor of animal husbandry. Proper nutrition of the sow, especially the supplying of necessary B vitamins and amino acids, will increase the litter size, cut down on runts and give better pig livability. Flushing sows before breeding increases the number of pigs produced. Too much fattening feeds result in high prenatal death loss.

Dr. Lasley recommends feeding sows at a rate of 1½% and gilts 2% of their body weight daily during gestation. This means a gain of 75-100 lb. for sows and 100-125 lb. for gilts. A level of 14-15% protein in total ration is desirable with some of the protein from animal origin. In dry lot sows must be provided all the necessary vitamins and minerals.

Antibiotics have little or no effect on sows' nutrition. However, antibiotic pellets implanted behind the ears of pigs at two days of age showed some value in preventing death losses and infection after farrowing, Dr. Lasley said. If the implants were made after the pig was two weeks of age they gave no advantage, he said. Implants helped some pigs and some litters but results were not uniform.

L. F. Tribble of the animal husbandry department spoke of work just completed on the effect of antibiotics on the protein level for feeding weanling pigs. Tribble's results, using a 12% protein ration and an 18% protein ration with and without antibiotic, indicate that the increased growth rate due to the antibiotic was the same at both protein levels and amounted to about .2 lb. a day. However, the 18% protein level with antibiotic gave .3 lb. better growth than the 12% protein with antibiotic. This indicates that antibiotic had no gross effect on protein level required for pigs.

Dr. Milton E. Taylor of the veterinary college pointed out that good nutrition and feeding practices are important in disease control. Well fed animals maintain a greater resistance against most diseases. Animal condition and health largely determine the effectiveness of vaccination and immunity. Poor sanitation results in feed losses due to parasites. Deficiency diseases can be prevented by insuring adequate supply of vitamin A, protein and phosphorus in breeding animals' rations.

Promiscuous use at high levels of antibiotics can decrease favorable florae of bacteria in the intestinal tract and allow resistant strains of more virulent organisms to develop. Sulfa drugs should be used only as directed by competent and wise research. Dr. Taylor said that specific disease control was important but much could be done by good nutrition, management and sanitation.

SIOUX BRAND

SIOUX FEEDS for all your needs

41 & 44% Soybean Meal • Cubes
• Rolled Oats • Oat Groats
• Ground Corn • Mixed Grains
• Pulverized Oats • Pellets
• Crumbles • Linseed Oil Meal
• Meat Scraps • Tankage

Telephone 4-6961 Teletype SX8
WESTERN SOYBEAN MILLS
(Division of Sioux Industries)
Box 801 Sioux Falls, S. D.

W. C. PRATT COMPANY, INC.
PRODUCERS and DISTRIBUTORS
FISH SOLUBLE CONCENTRATES
Vitamins
20 North Wacker Drive Chicago 6, Ill. Phone Franklin 2-7755

Dollar for Dollar...
there are no finer oat products than FRUEN'S

Fruen's

• FRUEN'S • FRUEN'S • F S • FRUEN'S • FRUEN'S •

We're not bragging. We're just positive of what our long experience and fine milling equipment can do in turning out the finest oat products, dollar for dollar, that money can buy. Just try Fruen's and compare!

Mixed cars shipped at straight car prices

Our Teletype number is MP 477

TOWER BRAND ROLLED OATS (Steam Rolled)
ACE BRAND ROLLED OATS (Steam Rolled)
WHOLE OAT GROATS
STEEL CUT OAT GROATS
GROUND OAT GROATS
GLENWOOD FEEDING OAT MEAL
FALCON BRAND PULVERIZED WHITE OATS
STANDARD BRAND PULVERIZED WHITE OATS
DAIRY BRAND COARSE GROUND OATS
STAR BRAND PULVERIZED MIXED FEED OATS
CRESCENT PULVERIZED OATS
MIXERS' PULVERIZED OATS
EAGLE BRAND STEAM CRIMPED OATS
OAT FEED (when available)
STEAM ROLLED WHOLE BARLEY
GROUND BARLEY
PEARLED BARLEY FLAKES (Max. 1½% fiber)
GLENWOOD BARLEY (pearled)
STAR PEARLED BARLEY GRITS
STEEL CUT DURUM WHEAT

FRUEN MILLING COMPANY
MINNEAPOLIS 5, MINNESOTA

• FRUEN'S • FRUEN'S • FRUEN'S • FRUEN'S • FRUEN'S • FRUEN'S • FRUEN'S • FRUEN'S •

Cubans Set Two-Price Method of Selling Molasses Surplus

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Faced with a shrinking alcohol market for molasses, the Cuban sugar institute has decided on a temporary basis to price its molasses carryover from the 1952 crop amounting to approximately 65 million gallons at 7¢ gal. for feed users and 4½¢ gal. when used for industrial alcohol purposes.

This two-price system will be effective, according to sugar institute officials, until April 1, 1953, when it is expected that the Cuban institute will swing over to a one-price system.

This information was disclosed at a joint meeting of U.S. Department of Agriculture officials and representatives from molasses producers, distributors and consumer groups.

Under the Cuban two-price plan all purchasers of molasses would be required to pay 7¢ gal., f.o.b. Cuban ports. In the case of the industrial alcohol industry when they certified and proved through U.S. alcohol tax unit data that they had consumed gallonage for distilling purposes they would be granted a rebate of 2½¢ gal. from the Cuban seller.

This proposition provoked criticism from the distributor interests who claimed that such a plan would result in all prices trending the low level. Feed consumer representatives also criticized the two-price system as unfair to the feed industry, which the molasses producers now see as their potentially best customer.

Carryover Reduced

On the supply side the Cuban representatives explained that a recent sale of 100 million gallons of blackstrap molasses had reduced the probable carryover from the 1952 crop to approximately 65 million gallons.

They estimated the new crop potential for export purposes at about 240 million gallons, representing the residual from new crop of 277 million gallons plus the 65 million old crop carry-in less 140 million gallons for domestic requirements.

At this time it might appear that the molasses industry planned to go after feed industry business in a big way; at least that was the avowed purpose of the molasses producers who appeared at the joint industry-USDA session.

Government officials view the outlook narrowly, however.

The threat facing the domestic and off-shore molasses producer is the apparently declining market for molasses in the industrial alcohol field. Since 1935 the synthetic alcohol industry has grown from 10% of the total volume to approximately 51% in 1952. That this trend may not be halted may be found in the USDA statement that "because of the growth of the synthetic alcohol industry, which can produce alcohol cheaply, to a capacity that will exceed requirements and because of reduced requirements for alcohol, it is apparent that fermentation alcohol can be produced only if raw materials costs are very low.

"To the producer of molasses this means that as long as some molasses continues to go to this usage, prices received for all molasses probably will be low and bear little relationship to feed value of molasses. The difficult problem facing the molasses industry is to determine the means that would be effective in expanding other markets to absorb quantities of molasses now competing for alcohol usage. The opinion of most observers is that increased feed utilization offers the only market of sufficient potential size to accomplish this purpose."

Misses Target

USDA officials who look narrowly on the molasses industry outlook remark that the merchandising of molasses is missing its feed industry target. They contend that none of the industry except for a few signal exceptions understand feed industry problems, and these officials are at loss to see how they can hope to exploit the feed industry market potential until they recruit personnel and distribution channels which are competent to deal with the feed manufacturers and direct feeders of supplies.

Molasses price fluctuations have tended to work against more general acceptance of molasses by the feed industry. Consumer representatives say there will have to be concrete evidence of long-range price stability before molasses can become a staple feed product.

That there is a huge market potential for molasses in the feed industry is recognized. Testimony from Florida molasses producers revealed great success in open tank feeding to livestock in that state. While molasses is an important feed for cattle, no one has solved the sanitation problem of feeding the liquid ingredient. Attraction of flies and other insects to tanks probably would ban shipments of milk to most metropolitan markets.

Dry Form Process

A solution to some of the drawbacks in using molasses in feeds was claimed at the meeting by Don Sargent, Clear Lake, Iowa, representing his father, E. O. Sargent. Mr. Sargent described a newly-discovered and patented method to process molasses into a pure, dry form. He said in this form molasses can be incorporated into feeds in any amount without the need for special mixers, tank equipment or pumps. Also, he said, it can be used on farms without concern over weather conditions or flies.

Beef Price Situation Discussed at Hearing on OPS Operations

WASHINGTON—Brief hearings on the operations of the price stabilization agency here this week before the joint congressional committee on the Defense Production Act were about as attractive as a day old pancake and just about as exhilarating, indicating the low level to which the price agency has declined.

The first witness to appear was the new administrator, Tighe Woods, the architect of the local advisory board technique to make recommendations on ceiling price adjustments. This phase of the Woods testimony brought from the committee chairman, Burnet R. Maybank (D., S.C.), a warning not to proceed too far with the expansion of these local advisory committees since when the new Congress takes over in January Mr. Woods is unlikely to be holding his present job.

The chief attention of the committee was directed to the present situation where beef cattle have fallen well below their original price ceilings, wholesale prices have fallen, but the retail markets have failed to reflect these declines.

Mr. Woods was unable to supply an adequate answer to the committee, but the assistant price director, Edward F. Phelps, told the committee that the stickiness of retail prices was emphasized largely in the better quality beef cuts and that there had been some recession in the selling price of the lower grades. He also explained that the retailers generally felt that they had been previously in a squeeze under price control and since the live cattle and wholesale prices had fallen below ceilings the retailer may probably be attempting to recover losses which he believed he had sustained previously.

Meat industry spokesmen told Feedstuffs that if controls were lifted all along the line, the price relationships between the different grades would quickly adjust themselves.

A point which was not brought out at the hearings is that at no time at any price are there enough higher grade top quality cuts of meat available.

Under price control and before, the tendency of the merchandisers has been to hold down the price of the prime cuts and boost the price of the lower grades. Now that the price structure is weakening, the lower grades are feeling the slump and retail volume can only be maintained by price inducements. On the other hand, the retailer, in order to maintain a profit margin on his meat sales, must obtain at least the price ceiling to come out.

Production

(Continued from page 1)

ried through such a program as that provided by the school. He praised and thanked the speakers and others, including Jack Dean, executive vice president of the association, for their efforts.

It was pointed out by some of the speakers that the feed men on the program were sharing information with competitors and other industry members for the good of the industry, the feeders and the public.

Oscar A. Straube, Pay Way Feed Mills, Inc., Kansas City, treasurer of the association, in presiding at one of the sessions, noted that feed company executives as well as production men would benefit from the school. He cited a talk on bulk feed delivery by Fred Hoover, Albers Milling Co., Los Angeles, as an example of the type of information of interest to all feed men.

Elmer Winterscheidt, Winterscheidt Grain & Feed Co., Seneca, Kansas, was chairman of the planning committee for the school. Mr. Burrell and John Heimovics, Jones-Hettelsater Construction Co., Kansas City, were "principals," association officers presided and Mr. Dean was praised for his work in organizing and carrying out the school.

Examinations covering lecture material will be sent to students at the school, and those passing the examination will be awarded proficiency certificates. Copies of talks also will be sent to students there.

At the close of the school, the students voted unanimously in favor of the Midwest association's holding another production school next year.

Chicks Placed in Principal Broiler Areas

(In thousands)

Week ending	Eastern Conn.	Del-Mar-Va.	Virginia Shen. Valley	North Carolina	North Georgia	N. W. Arkansas	Texas
Sept. 6	262	1,973	625	752	2,171	673	975
Sept. 13	228	2,142	629	731	1,977	763	1,020
Sept. 20	194	2,386	591	774	1,967	550	970
Sept. 27	222	2,394	591	726	2,057	644	1,013
Oct. 4	195	2,292	614	703	2,178	751	1,019
Oct. 11	233	2,437	552	538	2,185	857	1,181
Oct. 18	235	2,528	509	545	2,106	695	1,264
Oct. 25	265	2,470	637	633	2,198	841	1,223
Nov. 1	335	2,401	741	760	2,171	818	1,280
Nov. 8	292	2,528	777	734	2,065	762	1,337
Nov. 15	313	2,696	818	758	2,126	781	1,321

Week ending	Florida	Alabama	Indiana	Mississippi	—Total 11 areas— 1952	1951
Sept. 6	225	402	463	500	8,981	9,074
Sept. 13	191	462	524	504	9,175	9,020
Sept. 20	201	438	551	545	9,167	9,171
Sept. 27	199	446	525	535	9,354	8,976
Oct. 4	193	426	501	578	9,439	8,686
Oct. 11	221	448	586	678	9,916	8,596
Oct. 18	204	464	591	562	9,703	8,627
Oct. 25	206	489	677	586	10,235	8,917
Nov. 1	229	459	737	549	10,480	9,276
Nov. 8	231	524	709	643	10,652	9,330
Nov. 15	313	532	730	650	10,938	9,580

TURKEY BUYING REACHES 41-MILLION-POUND TOTAL

WASHINGTON—The U.S. Department of Agriculture this week announced acceptance of sales offers for 5,834,000 lb. of frozen ready-to-cook 1952-crop turkeys under the surplus removal program. Total purchases now amount to 41,167,578 lb. after adjustment for unconfirmed acceptances.

The program is a means of providing an outlet for temporary surpluses of turkeys which are resulting in unfavorable prices for producers, USDA explained.

Purchases Nov. 20 included: California 930,000 lb., Illinois 998,000, Minnesota 1,230,000, Missouri 420,000, Nebraska 636,000, New York 240,000, Ohio 780,000, Oklahoma 270,000, South Carolina 150,000, and Virginia 180,000.

South Dakota Feed Association Elects Frank S. Burson

SIOUX FALLS—Frank S. Burson, Western Soybean Mills, Sioux Falls, was elected president of the South Dakota Feed Manufacturers Assn. During the opening sessions of the group's ninth annual meeting here Nov. 20-21. He succeeds Carl Reed, Hart-Bartlett-Sturtevant Co., Vermillion.

Named vice president of the manufacturers' group was Art J. Herder, Tri-State Milling Co., Rapid City. Dr. W. E. Poley, Batcheller's, Inc., Sioux Falls, was elected secretary-treasurer, succeeding Henry G. Moeller, Sioux Alfalfa Meal Co., Vermillion.

The business session of the association preceded three sessions devoted to nutritional discussions on cattle feeding, presented in cooperation with South Dakota State College, with Mr. Burson serving as program chairman. All aspects of "Today's Newer Knowledge in Cattle Feeding" were discussed by college and industry experts in the field of nutrition and a record crowd of feed manufacturers, feed dealers and feeders was in attendance at the two-day conference.

Highlight of the social part of the convention was the banquet held the evening of Nov. 20. Final feature of the nutritional sessions the afternoon of Nov. 21 was a panel discussion on "New Developments in Livestock Feeding and Management," with Dr. Poley serving as moderator.

A complete report of the convention will appear later.

fortify with

Dawe's STEROL D_3

VITAMIN D_3 PRODUCED IN DAWE'S OWN IRRADIATION LABORATORIES SPECIFICALLY FOR POULTRY FEED FORTIFICATION

Dawe's Sterol D_3 provides the utmost in convenience, economy and reliability as the source of full vitamin D requirements for all types of poultry feeds.

Dawe's performs each production step in the process of vitamin D_3 manufacture, beginning with the extraction of the basic raw material, cholesterol. This is converted chemically to provitamin D_3, which is irradiated and purified to make the true vitamin D_3 contained in Dawe's Sterol D_3.

The vitamin D_3 is dispersed in a specially prepared nutritive carrier, resulting in a dry, completely free-flowing product that mixes easily with excellent dispersion throughout the feed. Handling and mixing are not affected by temperature changes. Dawe's Sterol D_3 is ideal for use in both batch and continuous mixing operations.

Dawe's Sterol D_3 is biologically tested and standardized for uniformity and dependability. It is available in all standard potencies. Two of the most popular are: 1,500 I. C. Units per gram in soybean meal and 3,000 I. C. Units in corn meal. As a basic producer, Dawe's also can supply vitamin D_3 in any practical potency... in powder, oil or water soluble forms.

Constant supplies of Dawe's Sterol D_3 are conveniently available to you. Shipments may be made from Dawe's plants in Chicago and Peoria, Illinois, and Auburn, Washington, or from strategically located warehouse stocks.

Let us quote on your requirements.

OTHER DAWE'S PRODUCTS FOR FEED FORTIFICATION

A-Seal-In—Dry A, new process for highest stabilization
AD-Seal-In—Combined, stabilized A and D
Dry D_3—For four-legged animals
A and D Feeding Oils—For animal and poultry feeds (Also water miscibles)
Riboflavin Supplements—Primary fermentations
Choline Chloride—Dry and Liquid (non-corrosive)
Pantothenic Acid
Niacin
Forbee—Standard combinations of Riboflavin, Calcium Pantothenate, Niacin and Choline
B_{12} Supplements—Primary fermentations
B_{12}-Antibiotic Supplements—Widest selection
Procaine Penicillin—Most effective antibiotic for poultry
Bacitracin—All-purpose antibiotic
R-Sonic 10x—Arsonic acid growth stimulant effective at low levels
Xanthophyll—For controlled pigmentation

Available singly in all standard potencies, or in combinations custom-blended to your specifications.

RENOWNED FOR QUALITY:
Dawe's feed fortification products and their trademark, a genuine Capodimonte Porcelain rooster, the original of which is on display at Dawe's Chicago office.

Dawe's **products company**
4800 S. RICHMOND STREET, CHICAGO 32, ILLINOIS
Distributors for Western Europe: Comptoir Anversois d'Importation, "COMANIMA"
13, Courte rue des Claires, Antwerp, Belgium

World's Oldest and Largest Specialists in Vitamin Products for Feeds

Grain Exchange Closings Moved Back Half Hour

Shorter trading sessions went into effect at U.S. grain exchanges Nov. 18 as the closing time was moved back to 1:15 p.m. from the 1:45 p.m. close in effect since last August.

By a vote of 469 to 442, members of the Chicago Board of Trade decided Nov. 17 to revert to the old closing time. The change in hours became automatic at Minneapolis following the decision at Chicago since the Minneapolis Grain Exchange board of directors previously had voted to follow along. The Kansas City Board of Trade also decided to shift its closing hours in line with Chicago.

The longer daily trading sessions had been put into effect last August at the time that Saturday sessions were abolished.

Another proposal voted on by Chicago board members was defeated 334 to 578. The proposal would have permitted officials of the board to purchase memberships for retirement each calendar year equivalent in number to the average number of deaths during the preceding five years.

GRAIN SUPERINTENDENTS TOUR CHICAGO ELEVATOR

CHICAGO — The Chicago Chapter of the Grain Elevator & Processing Superintendents toured the Continental Grain Co.'s Rock Island Elevator at its recent meeting.

The group of 75 formed in the afternoon to tour the elevator. An unscheduled part of the program was the emergency loading of a boatload of grain for Buffalo, N.Y. which the group witnessed. It showed an elevator crew working at top speed.

Dinner was served at Phil Smidt's Restaurant, Whiting, Ind., in the evening. E. R. Anderson, Norris Grain Co., chairman for the meeting, presided. A safety film was viewed, presented by Thomas Driscoll, safety director of Bronson-Dennely-Ulseth, Inc., Chicago.

The annual "Smoker Party" of the group is scheduled for Dec. 6.

CANADIAN COOPERATIVE SHOWS DROP IN SALES

WINNIPEG — A sharp decline in domestic sales for the year ending July 31, 1952, was reported by the Saskatchewan Cooperative Flour Mill, in a report to the annual meeting of the company held in Regina last week. Domestic sales totaled 87,032 bbl. With irregular export demand throughout the year, due to unsettled conditions at all established markets, it was necessary to make every effort to establish new markets. A quantity of low grade flour from No.

Roy Cohen

CSC APPOINTMENT — Roy Cohen has been appointed assistant to the general sales manager of the animal nutrition department of Commercial Solvents Corp., New York. Mr. Cohen has been with the company since 1949. As a member of the microbiological section at CSC's research center at Terre Haute, Ind., he worked with the nutritional research group on the development of several animal nutrition products. More recently he has been advertising manager of the animal nutrition department. As assistant to the general sales manager, Mr. Cohen will assist in handling the various functions and operations of sales of animal nutrition products. In addition, he will coordinate sales with sales promotion.

Farmers tell you why
BLUSALT SALES ARE ZOOMING!

Arnold Whitehair
Terra Alta, W. Va.

"Sterling Trace-Mineral Blusalt has improved the health of my stock . . . increased milk yield," *writes Arnold Whitehair, Whitehair Hereford Farm, Terra Alta, West Virginia.*

"Since using Blusalt, average weight is up, mortality down . . . milk production increased," *writes Erwin Everman, Erwin Everman Farms, Dansville, New York.*

"Blusalt has corrected conditions which were costing me money. I recommend it to any dairyman," *writes George T. Thompson, Bland, Virginia.*

Powerful advertising means more sales for you

14 farm magazines carry BLUSALT ads month after month.

33 top radio stations broadcast hard-selling BLUSALT messages several times a week—52 weeks a year.

Plus these 6 special "Farm Expert" Programs: George Haefner, WHAM, Rochester; Amos Kirby, WCAU, Philadelphia; Merl Galusha, WGY, Schenectady; Homer Martz, KDKA, Pittsburgh; Don Martin, WHCU, Ithaca; Malcolm McCormack, WBZ, Boston-WBZA, Springfield.

FEATURE . . . PUSH . . . DISPLAY . . .
BLUSALT
FOR MORE SALES . . . BIGGER PROFITS!
100-lb. bags
50-lb. blocks
4-lb. liks

MAIL THIS COUPON TODAY!
International Salt Company, Inc.
Scranton 2, Pa.
☐ Please have your representative call on or about _____ (date)
☐ Please send me more information on STERLING Trace-Mineral BLUSALT.
Name _____
Company _____
Address _____
Town _____ State _____

A Thanksgiving Message to Our Tuxedo Dealers

WE think it fitting in this issue of Feedstuffs, with the holiday less than a week away, to extend to all of our Tuxedo dealers everywhere our most sincere wishes for a Happy Thanksgiving.

Like you, we will be counting our blessings at Early & Daniel . . . and not the least of the many things for which we give thanks is the wonderful dealer organization of ours that has grown up over the years.

We are thankful that we have attracted to our Tuxedo family, men who measure their own success by the amount of honest, genuine service they can render their farmer friends in their own communities . . . men who feel that the best way they can serve their friends is to provide the feed that gives an honest dollar's value for a dollar spent.

And we are thankful that between our dealers and ourselves there exists a spirit of goodwill and cooperation that far transcends a mere business relationship. So we repeat, a Happy Thanksgiving to all!

The Early & Daniel Co.
Cincinnati 2, Ohio — *Our 71st Year*

THE FEEDERS' SILENT PARTNER

TUXEDO FEEDS
For Livestock and Poultry

You Can't Beat An Aeroglide Drier For Low Operating Costs

Owners Say:

Most impressive feature of Aeroglide drier is the low operating cost. Am drying corn for as little as ¼¢ per bushel. . . . Very pleased with the way my Aeroglide was delivered and erected, too. It took only five days for my installation!

Aeroglide Corporation
PHONE 3-4641
510 GLENWOOD AVE.
RALEIGH, NORTH CAROLINA

For top quality grain at lowest possible cost, you can't beat Aeroglide. Available for any capacity.

WRITE—WIRE—PHONE

★ Buy and Sell Through WANT ADS ★

WINS CHAMPIONSHIP—The youthful baseball team being sponsored by the Universal Milling Co. of Los Angeles and Colton, Cal., is enjoying a winning season. Recently the club won the Southern Division Triple A championship and has now gone on to the Winter Triple A league. William Gray, a Los Angeles grainman, is manager. Team members, top row, from left, are: Ed Sappoe, scorekeeper; George Anderson, ss; Tom Dosen, cf; S. Johnson, u; Don Lee, rf; L. Landy, p; J. Schiro, c; Joe Danforth, Universal Milling Co. Bottom row, from left: Mr. Gray, manager; Don Kenway, lf; Dennis Abbott, p; Dick St. John, 1b; Bill Consolo, 3b; Horace Consolo, p; Jack Maguire, 2b. Seated: Harry Brickham, trainer.

5 wheat was shipped to Hong Kong, Singapore, Greece and Egypt.

As a result of the cooperation of the Canadian Trade Commissioners in various countries, new agencies have been established and sales made to the following countries: Belgian Congo, British West Indies, Colombia, Ecuador, British Guiana, Macau, Indonesia and Nicaragua. Export sales from the Saskatchewan Flour Mill for the year amounted to 300,320 bbl.

Plans for expansion were approved a year ago, and are being carried out. It is anticipated that production will be increased by 200 bbl. a day, until the maximum figure of 2,000 bbl. a day has been reached.

Honeggers BIG H FEEDS
Fortified With Amazing New
ANI-PRO 12
A Powerful New Vitamin Concentrate With APF
HONEGGERS' & CO.
Fairbury & Forest, Ill.
Honeyer-Manley Division, Mansfield, Ohio
© 1949

ANNUAL DINNER

WISNER, NEB. — The Albers Brothers held their annual turkey dinner here Nov. 11 for more than 200 guests, representing employees, alfalfa growers, feeders and customers. Gerald Kane, manager of the dehydrating operations, acted as toastmaster.

Yes—By calling W & D about your ingredient needs, you put in your hand—80 years' trade experience in fertilizer and feed ingredients in world markets
Next time you buy—consult us first.

IMPORTED and DOMESTIC

FISH MEAL

★ ★ ★

DICALCIUM PHOSPHATE

Min. B. P. L. (about 18% phosphate)

★ ★ ★

BONE MEAL

Sterilized, Steamed

. . . and all Feed Ingredients

Established 1873
Woodward & Dickerson Inc.
1400 SOUTH PENN SQUARE, PHILADELPHIA 2, PA., U. S. A.
TELEPHONE: LOcust 4-5400 Cable Address: "Woodward" TELETYPE: PH 104

The Brower Mixer is a profit maker . . . helps us sell more supplements, too!

. . . says Everett Flick
Farmers Feed Mill
Barry, Illinois

"We installed a Brower One-Ton Feed Mixer in 1947 and it has been in constant use every working day since. Sure does a good mixing job and we've had no repair expense so far. It has brought in a lot of new customers, too—has helped increase our feed business at least 25%. Besides that, we sell more supplements, since more customers come to us for their grinding and mixing. I'd say the Brower Feed Mixer is one of our best profit-makers."

BROWER *Whirlwind* **FEED MIXER**

Used by More Feed Men than Any Other

Thousands of feed dealers are mixing their own brands of feed with the Brower "Whirlwind" Mixer, increasing their feed profits as much as $10 per ton. Custom mixing is another good source of income—another reason why the Brower Mixer quickly pays for itself.

Mixes a perfect blend in approximately 10 minutes—at a power cost from 3¢ to 5¢ per ton. Above-and-below-floor models. Five sizes—mixing capacities from 700 to 4,000 lbs. feed. Heavy welded steel construction—gives years of trouble-free service. Many outstanding features—easier and faster to operate.

30-Day Trial. Write today for full details

BROWER MFG. CO.
402 N. 3rd, Quincy, Illinois

World's Largest Selling Mixer!

a complete line of
QUALITY OAT PRODUCTS

Doughboy INDUSTRIES INC.
New Richmond, Wisconsin

CONVENTION CALENDAR

Dec. 1-2—Farmers Elevator Assn. of South Dakota; Marvin Hughitt Hotel, Huron, S.D.; Sec., Clif C. Anderson, 327 Citizens Bldg., Aberdeen, S.D.

Dec. 2-4—Minnesota Poultry Hatchery Assn.; Hotel Radisson, Minneapolis; Sec., L. L. Baumgartner, Litchfield, Minn.

Dec. 3-5—Montana All-Industry Poultry School; Montana State College, Bozeman, Mont.; Chr., E. R. Halbrook, Dept. of Poultry Industry, Montana State College, Bozeman, Mont.

Dec. 3-5—The Jersey Chick Assn., annual meeting and poultry exposition together with New Jersey Turkey Growers' Assn., the New Jersey Poultry Breeders Assn. and the New Jersey Feed Dealers; Hotel Dennis, Atlantic City, N.J.; sec., J. C. Taylor, College Farm, New Brunswick, N.J.

Dec. 11-12 — Nutrition Conference for the Feed Industry; North Carolina State College of Agriculture and Engineering; University of North Carolina, Raleigh, N.C.

Dec. 11-12 — Nebraska Formula Feed Conference; Nebraska A & M College, Lincoln, Neb.; sponsored by the college, Midwest Feed Manufacturers Assn., Nebraska Grain & Feed Dealers Assn., Nebraska Feed Manufacturers Assn., and the State Board of Agriculture; chm., W. J. Loeffel, Department of Animal Husbandry.

Dec. 11-12—North Carolina Feed Manufacturers Assn., Sir Walter Hotel, Raleigh, N.C.

1953

Jan. 12-14—American Dehydrators Assn.; Casablanca, Jokake, Paradise and Royal Palms Resort Inns, Phoenix, Ariz.; exec. sec., Lloyd S. Larson, 1015 Dwight Bldg., Kansas City, Mo.

Jan. 12-14—North Dakota Poultry Industries; Elks Club, Fargo, N.D.; chm., Lloyd M. Forness, State Capitol, Bismarck, N.D.

Jan. 13-14—Kansas Formula Feed Conference; Kansas State College, Manhattan, Kansas; sponsored by the Kansas State Board of Agriculture, Kansas Grain, Feed & Seed Dealers Assn., Midwest Feed Manufacturers Assn., and the college; Prof. F. W. Atkeson, Department of Dairy Husbandry, Kansas State College, Manhattan, Kansas.

Jan. 15-16—Poultry and Egg National Board; La Salle Hotel, Chicago; Mgr., Don W. Lyon, Poultry and Egg National Board, 185 North Wabash Ave., Chicago 1, Ill.

Jan. 19-20—The Northwest Retail Feed Assn., Inc.; Hotel Nicollet, Minneapolis, Minn.; Sec., W. D. Flemming, The Grain and Feed Review, 112 Grain Exchange Bldg., Minneapolis, Minn.

Jan. 20-24—Boston Poultry Show and Country Life Exposition; Mechanics Bldg., Boston, Mass.; chm., Paul Ives, 39 Church St., New Haven, Conn.

Jan. 25-27—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis, Ind.; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

Jan. 28-29—Feed Dealer's Short

(Continued on page 16)

"ALL YOUR NEEDS IN GRAIN AND FEEDS"

SUNSET FEED & GRAIN CO., Inc.

805 Dun Building, Buffalo 2, N. Y. Branch Office: Middletown, N. Y.

FEED JOBBERS

CANE FEEDING MOLASSES

Agents for Pacific Molasses Co., Ltd.

Albany Baltimore
Buffalo New Orleans

Distributors of

Kellogg's Hominy Feed
Hercules Dried Whey
Hubinger (Keokuk) Corn Gluten Feed
Calf Manna
Stonemo Granite Grit

SUNSET BRAND FEED

(An exclusively milk product)
A rich and uniform source of Lacta Albumin and Minerals

● WRITE US FOR FURTHER INFORMATION ●

GROWING POPULARITY IN THE GROWING SOUTH

Yes, feeds in the red horseshoe bags are growing in popularity in the expanding poultry and livestock industries in the South. That's why SECURITY dealers find sales increasing. Southern feeders are feeding more SECURITY FEEDS than ever before.

SECURITY FEEDS

SECURITY MILLS, Inc.

KNOXVILLE 1, TENN.

FeeDOil

VITAMIN "D" Feeding Oil

Several Guaranteed Potencies. Economical . . . Dependable

VITAMIN "D" in Dry Form!

Mixes thoroughly, pours like flour! Saves time and money!

FeeDri

THOMPSON-HAYWARD CHEMICAL CO.
KANSAS CITY 6, MO. (18)

Sell STONEMO

The GRIT with the Extra Grinding Surfaces

STONE MOUNTAIN GRIT CO.
Lithonia, Ga. Barre, Vt.

FISHMEAL

FISHLIVER OILS — BONE MEAL

and OTHER FEED INGREDIENTS

LINDFORS CHEMICAL CO. Inc.

One East 42nd St., New York 17, N. Y.
Murray Hill 7-8280, 7-8290, 7-5849

"AGED IN THE WATERS OF MOBILE BAY!"

EGGSHELL BRAND OYSTER SHELL

SOFT, DIGESTIBLE
97% CALCIUM CARBONATE

SOUTHERN OYSTER SHELL MILLING CORP.
MOBILE, ALA.

ADVERTISE YOUR PRODUCT

FEED SIGNS

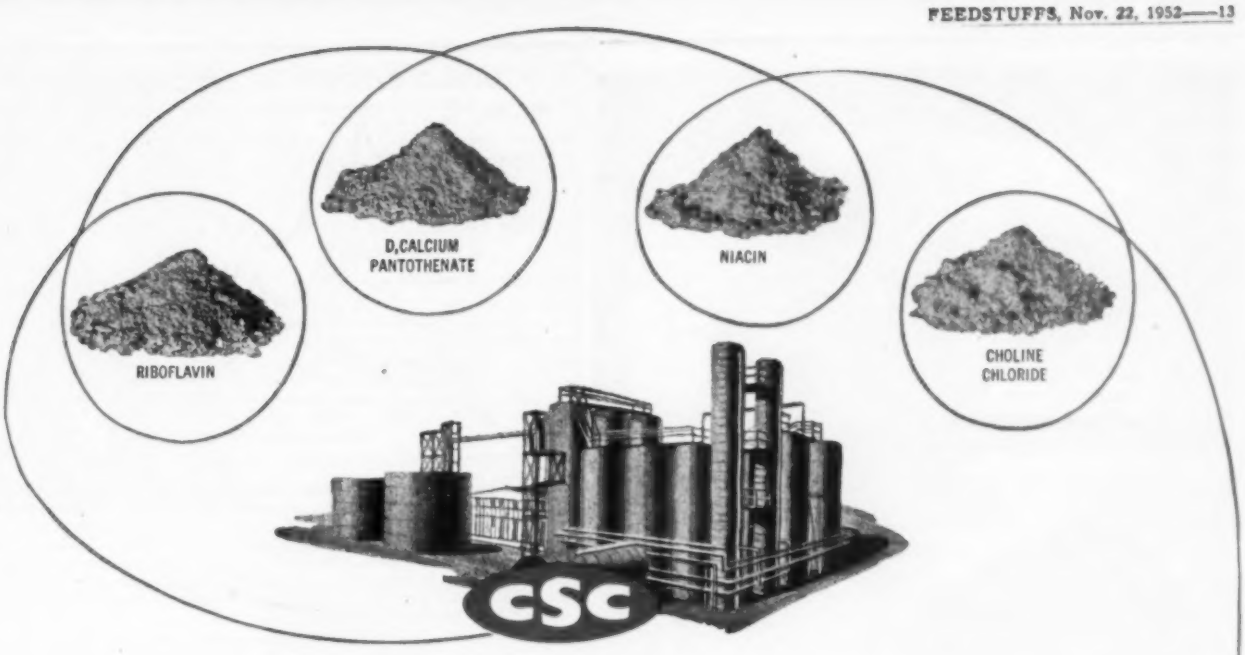
MADE TO ORDER SIGNS OF ALL TYPES ON METAL, MASONITE OR CARDBOARD. AS LOW AS 50¢ EACH IN 00 LOTS FOR 14x20 METAL SIGNS. LARGE SIZES ALSO. WRITE FOR DETAILS

DIRECT FROM FACTORY TO YOU

PROMPT SERVICE

"WE SIGN THE NATION"

ACTIVE DISPLAY ADV.



One Call for All Four Basic B Vitamins

in new B·Y-60

MULTI-VITAMIN FEED SUPPLEMENT

B·Y-60 is the multi-vitamin feed supplement used by many feed manufacturers in preference to individual vitamin supplements! Here is the preferred combination—with potencies guaranteed at 2 grams of riboflavin, 4 grams of d,calcium pantothenate, 9 grams of niacin, and 10 grams of choline chloride per pound of supplement.

Here are the advantages of B·Y-60: **1. Time-saving. 2. Convenient. 3. Greater blending accuracy. 4. Actual saving in money with fewer man hours and less material needed.**

Of course, that's not the whole story. Add to that the fact that you get an all-rich-feed carrier! You get dried fermentation solubles, hominy feed and corn germ meal, in addition to the four basic B vitamins, all in one supplement. Take a look at this outstanding four-in-one supplement.

Write for samples and further details.

OTHER COMBINATIONS, TOO!

As you know, CSC is a basic producer of a quality line of vitamin and antibiotic feed supplements. But more than that, CSC is equipped to serve feed manufacturers with other combinations of the four basic B vitamins as well as penicillin and bacitracin combinations. For fast, dependable, year-around service to meet your specialized needs, call on CSC! Write us today.

Write Animal Nutrition Department, Commercial Solvents Corporation, 260 Madison Avenue, New York 16, N. Y., or 105 South 7th Street, Terre Haute, Indiana.

ANIMAL NUTRITION DEPARTMENT

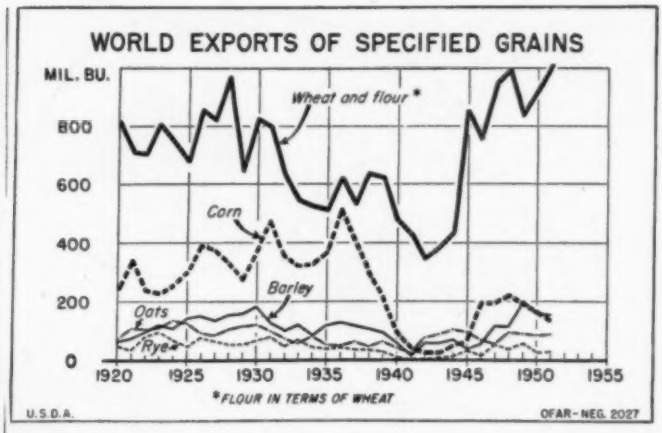
CSC

COMMERCIAL SOLVENTS CORPORATION

QUALITY INGREDIENTS FOR THE FEED INDUSTRY

RIBOFLAVIN, CHOLINE CHLORIDE, NIACIN, B_{12} & MULTI-VITAMIN FEED SUPPLEMENTS • BACITRACIN AND PENICILLIN ANTIBIOTIC FEED SUPPLEMENTS • BACIGRO IMPLANTATION PELLETS • CANE FEEDING MOLASSES

Multiple ingredients from feeders
SELECT-O-WEIGH
(ELECTRONIC WEIGHT CONTROL)
Remote, Instantaneous Dial-Control Formula Changing and Ingredient Selection
For FEED PROPORTIONING Applications
Batch hopper capacity to suit
Select-O-Weigh, Richardson's electronic weight control system, reduces the most complex formula-changing and ingredient-selection problem to push-button simplicity. For with Select-O-Weigh you select, measure, and deliver up to twelve ingredients from a single, pre-set, remote-automatic control panel.
Through incorporation of a simple, fool-proof electronic circuit, Select-O-Weigh changes formulas instantly, with the setting of a dial—no sliding poise adjustments or manual weight changing. And a single, automatic scale handles many ingredients—up to twelve or more.
Select-O-Weigh is designed for either cumulative or consecutive weighing, and can be used with many existing automatic scales.
The Richardson Scale Company, Clifton, N. J., will be glad to supply information on:
Feeder-Weighing Systems • Automatic Bulk Weighing Hopper Scales
Automatic Bagging Scales • Bag Sewing Conveyors • Packers
Process Control Panels and Select-O-Weigh
Please write direct to our Clifton office, or to the nearest of our branch offices, located in Atlanta, Boston, Detroit, Minneapolis, Cincinnati, Wichita, Montreal, Omaha, New York, Pittsburgh, San Francisco, Toronto, Buffalo, Chicago, Philadelphia, Houston.
Write for Select-O-Weigh Bulletin #0351.
Richardson
MATERIALS HANDLING BY WEIGHT SINCE 1901



WHEAT LEADS—Over the year, wheat, wheat flour and corn have made up a major portion of the grain entering international trade channels. The dominant position of wheat and flour may be explained largely by the fact that consumers the world over are prepared to pay more for those commodities than for any other grain. Among the bread grains, rye has always been very much of a "stay-at-home" crop, and world trade in oats and barley has always been limited. Corn is in demand for feed because it can be produced more cheaply than potential substitutes.

THREE OHIO AGENCIES TO PRINT FEED GUIDE

COLUMBUS—Information in animal nutrition and related fields will be carried in the Ohio Feed Guide, a new publication being issued cooperatively by the Ohio Agricultural Extension Service, Ohio State University and the Ohio Agricultural Experiment Station.

Its objective will be the dissemination of information to help shorten the time lapse between discovery of basic facts of nutritional feeds and application of existing knowledge to feeding and management operations. The publication also provides an extension of the services rendered through the annual Ohio Animal Nutrition Conference and will become an interim information sheet.

J. E. WOLF BUYS FEED STORE

SALEM, ARK.—J. E. Wolf has purchased the feed, fertilizer, seed and general business from W. O. Wadley and is now operating the store.

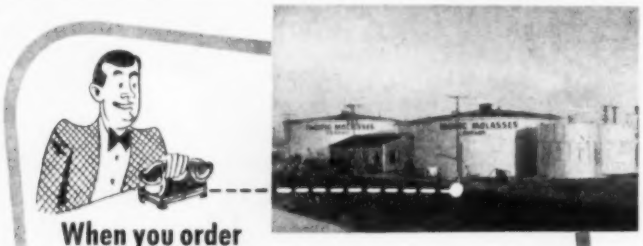
HANGARS BECOME BINS

WINNIPEG — The Saskatchewan Wheat Pool has completed arrangements for the lease of two hangars at the Mossbank airport which will provide storage capacity for an estimated 600,000 bu. wheat. The pool is carrying out negotiations in an effort to obtain similar storage facilities at six or seven other points in the province. Delivery to the Mossbank hangars which have been licensed as special annexes to the Mossbank Pool Elevators will be limited to dry wheat grading 1, 2 & 3 northern.

2 SASKATCHEWAN POOL FIRMS REPORT SURPLUS

WINNIPEG — Net operating surplus of the Saskatchewan Pool Elevators, Ltd., and Saskatchewan Pool Terminals, Ltd., was $6,320,000 for the year ending July 31, 1952. This was revealed in the report of the directors presented to the delegates attending the annual meeting, which was held in Regina, Sask., last week. The report showed that earnings were made on handlings of 179,623,910 bu. of grain through pool country elevators, and 113,711,293 bu. through the Saskatchewan Pool Terminals.

The handled result was achieved with 76,076,000 bu. of country elevator and annex space made up of 1,155



When you order

CANE FEED MOLASSES

. . . . what's at the other end of your telephone?

Pacific Molasses Company is a complete organization with its own 11 strategically located distributing stations, like the station pictured here—its own tank cars and tank trucks—its own experienced, technically-trained field men. You can rely on your order receiving prompt and careful attention.

PACIFIC MOLASSES COMPANY
215 Market Street, San Francisco 5, Calif.
120 Wall Street, New York 5, New York
309 Delta Building, New Orleans 12, La.

Phone, wire or write our nearest office for prices and other information.

BEET PULP
DOMESTIC and IMPORTED

MOLASSES
BLACKSTRAP IN DRUMS
A Size to Fit Your Needs

B/M **BILL MERRITHEW COMPANY**
5407 Excelsior Blvd.
MINNEAPOLIS
PHONE: WA 0111
TWX: MP 426

GIVE YOUR FEEDS THAT EXTRA PUSH

by using GERBER'S T.B.C. which is made from Vitamin Enriched Bread and has a very Low Moisture Content.
Protein 14% — Carbohydrates 74%.

TBC
T. M. Reg. U.S. Pat. Off.

Write for samples and prices.
Truckload and Carload lots.

CHAS. A. GERBER COMPANY
732-740 No. Highland Ave., Aurora, Illinois

WANTED—DISTRIBUTORS

We have a wonderful poultry product that has the nod of approval from many men in and allied to the industry. There is a good profit for dealers and distributors that are doing a real selling job. The product is being consistently advertised in several poultry publications.

Write today for details

Box 790-3181 FEEDSTUFFS Minneapolis, Minn.

G. R. Knauer

NAMED BY BEMIS—On the recent appointment of Oliver M. Smith as manager at Minneapolis for the Bemis Bro. Bag Co., G. R. Knauer succeeded him as sales manager. Mr. Knauer has been with Bemis since 1948. He formerly headquartered in Grand Forks, N.D., where he covered both North and South Dakota. In the army four years, he was separated with the rank of lieutenant colonel.

country elevators and more than 1,100 annexes.

Terminal handlings were effected through three terminals at the lakehead with a combined storage capacity of approximately 20,500,000 bu. This figure does not take into account the amount of storage space now out of operation as a result of the dust explosion Sept. 24.

In addition to grain handled through country and terminal elevators, 623,598 bu. of wheat were delivered to the wheat pool flour mill at Saskatoon.

BURLAP TRADE CITED

NEW YORK—Burlap was featured as a major aid to healthy trade relations and friendship between India and the U.S. when the new Indian ambassador, G. L. Mehta, made his first appearance before American TV audiences on the "Georgetown Forum" program. He was interviewed on this program Nov. 9. Other guests on the forum were Morris Rosenthal, advisor on Asian trade matters to the U.S. government and president of Stein, Hall & Co., burlap importer, and John C. Lynn, legislative and foreign affairs director of the American Farm Bureau Federation.

ROCKLAND CHEMICAL CO. APPOINTS SALES FIRM

NEWARK — Rockland Chemical Co., Inc., Newark, N.J., manufacturers of chemicals and medicinals for the poultry and dairy industries, has announced the appointment of Lockwood Nutrition Service, Inc., of Boston, as sales representatives for the Rockland Line in the New England territory.

The Lockwood Nutrition Service, Inc., is directed by H. W. Lockwood, assisted by John Costa. Their representation of Rockland Chemical Co., Inc., in the New England area became effective Nov. 1.

Clip That Coupon Now!

We'll send you a batch of samples and the whole story of Savage Tag quality and service. Tags that are easy to sew. Tags so strong you can grab a tag and pull a bag. Tags that tell at a glance what is in any bag. And service that will design, produce and deliver in any quantity at the time specified.

BB
COUPON
Clip this coupon to your letterhead. We'll send free "batch of samples" of better tags and money saving information.

FEED "TAGS THAT TALK"®

SAVAGE FEED TAG LEADER Since 1919

SAVAGE, Inc. Now a Division of BAKER, JONES, HAUSAUER & SAVAGE, Inc.

251 MAIN STREET
BUFFALO 3, N. Y.

let us show you HOW TO BOOST EGG PRODUCTION
let us show you HOW TO START CHICKS FASTER with ARCADY CHICK STARTER CRUMBLETS
let us show you how to PUSH your bags to market with ARCADY 40% SUPPLEMENT
let us show you HOW TO MAINTAIN PEAK MILK FLOW with ARCADY 20% PIG and SOW FEED
DEALER IMPRINT
ARCADY

FREE!

Send us a post card today to see how this unique Arcady merchandising plan works.

ARCADY MAT-OF-THE-MONTH CLUB

gives you personalized ads monthly

HOW TO JOIN OUR MAT-OF-THE-MONTH CLUB PROGRAM

It's simple—just send a card telling us you want to know more about it. We'll do the rest!

Here's another example of the powerful merchandising help available to Arcady Dealers. Under this unique "the-dealer-comes-first" plan you receive a tested, highly-successful set of mats every month specially personalized—featuring your picture and your store—in order to help you cash in on your position and prestige in the community. What's more, each set of mats is *timely*—designed to meet the specific needs of your customers from month to month!

SELL ARCADY FEEDS

ARCADY FARMS MILLING COMPANY

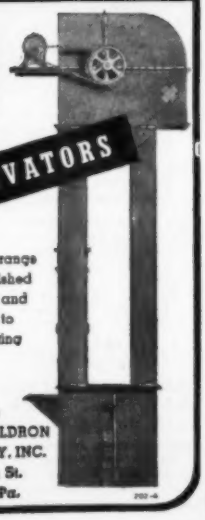
DEPT. 12-M, 223 WEST JACKSON BLVD., CHICAGO 6, ILLINOIS

SILMO
VITAMIN OILS
SILMO CHEMICAL CORP.
VINELAND, NEW JERSEY

SPROUT-WALDRON

SW SINCE 1860

ELEVATORS



A complete range of sizes furnished in a design and construction to every elevating need.

Write SPROUT-WALDRON & COMPANY, INC. 81 Logan St. Muncy, Pa.

MARTHA WHITE

SELF-RISING FLOUR

"Goodness Gracious, It's Good"

As Advertised Over

WSM GRAND OLE OPRY

Every Saturday Night

A FEW SALES FRANCHISES OPEN—WRITE

MARTHA WHITE MILLS, INC.

NASHVILLE 6, TENNESSEE

Importers and Wholesalers of . . Canadian Screenings

SUPERIOR FEED COMPANY

Board of Trade — Duluth 2, Minn.
Phone: 2-0777 — Teletype DU 16

Members: American Feed Manufacturers Association
The Grain and Feed Dealers National Association

CONVENTION CALENDAR

(Continued from page 12)

Course; sponsored by the West Virginia Feed Dealers Assn., in cooperation with West Virginia University's College of Agriculture and the West Virginia State Department of Agriculture; University of West Virginia campus, Morgantown, W. Va.; chm., G. C. Anderson, Animal Husbandry Department, West Virginia University, Morgantown, W. Va.

Jan. 29—The Barley Improvement Conference; Hotel Nicollet, Minneapolis; sponsored by Midwest Barley Improvement Assn. and Malt Research Institute; dir., John H. Parker, Midwest Barley Improvement Assn., 828 N. Broadway, Milwaukee 2, Wis.

Jan. 29-30—Second Annual Poultry Disease Conference; University of New Hampshire, Durham, N.H.; chm., Prof. W. C. Skoglund, Poultry Department, University of New Hampshire.

Feb. 14-17—Institute of American Poultry Industries Fact Finding Conference; Kansas City Municipal Auditorium, Kansas City, Mo.; pres., Cliff D. Carpenter, 221 N. LaSalle St., Chicago, Ill.

Feb. 17-18—Virginia Polytechnic Institute Nutrition School; Blacksburg, Va., Chr., Paul M. Reaves, Virginia Polytechnic Institute, Dept. of Dairy Husbandry, Blacksburg, Va.

Feb. 19-20—Midwest Feed Manufacturers Assn. annual agricultural forum; Hotel President, Kansas City; exec. vice pres., J. D. Dean, 20 W. 9th St. Bldg., Kansas City, Mo.

Feb. 22-24—Farmers Grain Dealers Assn. of Ohio; Commodore Perry Hotel, Toledo, Ohio; Sec., C. S. Latchaw, Box 258, Defiance, Ohio.

Feb. 27-28 — Dehydrators Production Conference; Kansas State College, Manhattan, Kansas; Loren V. Burns, Feed Milling School, Kansas State College.

April 13-15—National Fisheries Institute; Shoreham Hotel, Washington, D.C.; sec., John A. Fulham, Fulham & Herbert Fish Co., Boston, Mass.

May 1-2 — Kansas Grain, Feed & Seed Dealers Assn.; Hotel Kansas, Topeka, Kansas; sec.-treas., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

May 8-12 — National Cottonseed Products Assn.; Ambassador Hotel, Los Angeles; pres., W. B. Coberly, Jr., 731 Sterick Bldg., Memphis.

May 13-15—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 West Jackson Blvd., Chicago, Ill.

June 7-9—Indiana Grain & Feed Dealers Assn., Inc.; mid-summer outing, French Lick, Ind.; exec. sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

June 8-10—National Feed Industry Show; Buffalo Municipal Auditorium, Buffalo, N.Y.

July 28-31 — American Poultry & Hatchery Federation; Milwaukee, Wis.; exec. sec., Don M. Turnbull, 15 W. 10th St., Kansas City 5, Mo.

Oct. 14-15—Assn. of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; Sec., L. E. Bopst, Rm. 036, New Chemistry Bldg., University of Maryland, College Park, Md.

GROW WITH PROVICO

PROVICO FEEDS • CINCINNATI, OHIO

Burhop & Company

FEED BROKERS

Specializing in

SOYBEAN OIL MEAL

619 Gettle Bldg. — Phone A-7246
Fort Wayne 2, Ind.

TRANSIT

GRAIN & SEED MERCHANTS

SINCE 1920

FORT WORTH, TEXAS

Make Your Customers GOOD Customers . . . all year 'round

SUPREME Brand Condensed BUTTERMILK

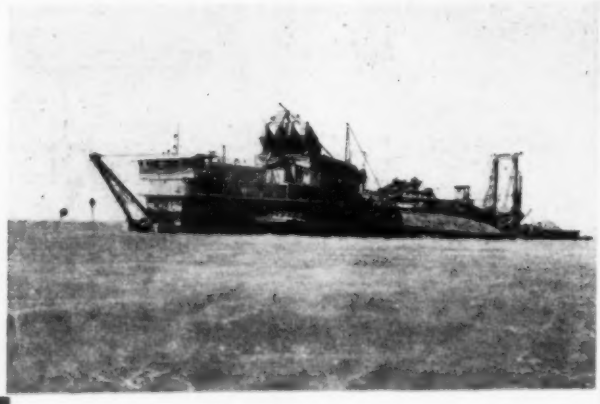
HERBERT K. CLOFINE, Inc.

MILK PRODUCTS

612 Bulletin Bldg. — Phila. 7, Pa.

shellbuilder

is as important for high quality egg production as anything a feed dealer sells.



SHELLBUILDER it's naturally better

Scooping oyster shell from Galveston Bay. From start to finish—from the bay to your customers—modern machinery, experienced men, and close inspection assure the uniform high quality of every sack of Shellbuilder.

SHELLBUILDER COMPANY

MELROSE BUILDING, HOUSTON TEXAS

"This is the pellet you WANT for better finish, faster gain, more high-quality market birds . . ."

ASL stil-capo

Because

- Full 15 mg. Stilbestrol. (Dr. F. W. Lorenz says: "They (the pellets) are satisfactory if they contain 15 mg. of diethylstilbestrol." — *Calif. Agr.*, Sept. 1949)
- Cylindrical in shape with the right compression for proper absorption. (Round pellets can be too hard).
- Stil-Capos are swiftly and easily implanted with no occasion for a miss, slip or overdose.

For smaller flocks feature the multiple package, complete with Stil-Capo, "Easy" single-shot implanter and full directions. Units of 35 or 100 pellets in attractive counter display cartons.

DEALERS: See your nearest Stil-Capo distributor or write

AMERICAN SCIENTIFIC LABORATORIES, Inc.

MADISON 1 — WISCONSIN

California Depot: Pan Western Distributors, 1st and Townsend Sts., San Francisco 7

New England Depot: Duggie & Co., 116 Foundry St., Wakefield, Mass.

For GROWTH BENEFITS **plus** COCCIDIOSIS PREVENTION Mix

DR. SALSBURY'S **NITROSAL**

In Your Feed

Your Choice

of Two Products

For These GROWTH BENEFITS To Make Your Feed *Easier To Sell*

- Faster Growth
- Lower Feed Cost
- Redder Combs
- Yellower Skins
- Better Feathering
- Higher Market Value
- Improved Quality
- More Profit Per Bird

Growers See The Difference

For GROWTH BENEFITS **without** COCCIDIOSIS PREVENTION Mix

DR. SALSBURY'S **3-NITRO** Powder

In Your Feed

improved feed results

...Even With Vitamin B_{12} and Antibiotics In The Feed

NITROSAL or 3-NITRO Powder gives your feed EXTRA growth benefits . . . *even feeds that already contain Vitamin B_{12} and Antibiotics.* In addition to its growth benefits, NITROSAL also prevents coccidiosis. Increase your feed results, feed sales; mix NITROSAL or 3-NITRO Powder in your feeds NOW!

Send for NITROSAL and 3-NITRO bulletins. DR. SALSBURY'S LABORATORIES, Charles City, Iowa.

3-NITRO Powder For Laying Mashes

3-NITRO Powder is highly recommended as an additive for the laying mash. Gives your laying mash extra sales and feeding benefits. Send for special prospectus.

Mix DR. SALSBURY'S 3-NITRO Powder In Your Hog Feeds For Faster Growth

27% FASTER HOG GROWTH
14% LESS FEED Per Lb. of Gain

Send for special 3-NITRO Powder hog feed prospectus.

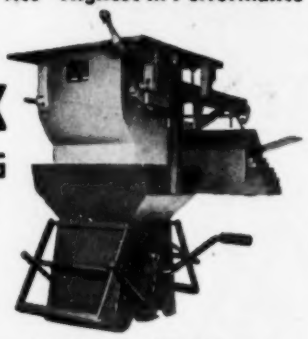
recommend, promote and profit from Dr. SALSBURY'S *complete line of poultry medicines*

Burrows HAS EVERYTHING!

SEND FOR Free 96 PAGE CATALOG today!

Lowest in Price • Highest in Performance

APEX BAGGING SCALE



Combines Filling and Weighing in one Fast, Semi-automatic Operation!

Here is the most highly-perfected, completely self-contained bagging scale ever produced! It handles four to six 100-lb. bags a minute and features—a 2-to-1 leverage system for greater accuracy—simple over-and-under indicator—extra large dash pot—dust shield to protect machine and operator—slide control gate—and a new combination bag clamp. It's fast, accurate and very simple to operate.

Send for Full Details

Buy it from BURROWS EQUIPMENT COMPANY
1316-C SHERMAN AVENUE
EVANSTON, ILL.

Handling the Credit Problem

By Robert G. Cook

IN THIS discussion of feed dealers' credit operations and credit problems, I decided to cover the subject from the basis of:

1. The necessity for the feed dealer to use credit as a tool for getting the needed volume to operate profitably.
2. A few of our credit experiences with our feed dealer customers.
3. How we analyze credit factors and determine whether or not to extend bank credit.
4. The unfavorable results of too much credit to the dealer and farmer.
5. A few suggestions that may help the feed dealer to get additional services from the local commercial bank.

• • •

1. The necessity for the feed dealer to use credit as a tool for getting the needed volume to operate profitably:

I believe that we all can agree that the feed and grain business operates on a small margin depending on a rapid turnover in order to be profitable. It also seems fairly obvious that it is a necessary part of doing business to extend a reasonable amount of credit. Your customers depend on this and expect it.

In my opinion, you are continually in a difficult situation. If you do not extend a reasonable amount of credit, your competitor will, and thereby get your customers' business. If you extend too much credit, not only the farmer, but you will get into financial difficulty. With this situation, the only protection the dealer has is his ability to analyze the repayment ability of his customer and to use good judgment in the extension of credit.

Once a customer begins to fail to pay his bill within 30 days, the account should be watched very carefully. It does not take long for it to become a 60 days' account, or even longer. The pressure of other creditors may mean that they will get their money, because it is very easy to let a feed or grain bill go. Your customer realizes that he is not paying any interest on his open account. He knows his dealer or his

EDITOR'S NOTE: The author of the accompanying article is assistant vice president of the Industrial Trust Co., Providence, R.I. In this article, Mr. Cook discusses feed dealers' credit problems and offers some advice on handling the problems. The article is from a talk by Mr. Cook at the New England Feedmen's Conference at the University of New Hampshire.

Ray Ewing PRODUCTS

Distributed in Washington, Oregon, Montana, No. Idaho and British Columbia *by*

LEO COOK CO.
1202 American Bldg.
SEATTLE 4, WASH.
410 Lewis Bldg.
PORTLAND 4, ORE.

QUALITY GOES IN BEFORE THE NAME GOES ON

Are Your Customers Making Money?
They Will Be If You Sell Them

LIFE GUARD FEED

And you will, too!

THE UBIKO MILLING COMPANY, Dept. F. S. 1152, Cincinnati 17, Ohio

AGRICULTURAL DEPARTMENT NOPCO
25th
YEAR OF VITAMIN PIONEERING
FOR THE FEED INDUSTRY
HARRISON N J

The first and only feed fortifier to make this amazing guarantee!

NOPCOSOL*

COMPLETE AND STABLE VITAMIN—ANTIBIOTIC—TRACE MINERAL FEED SUPPLEMENT

TRIPLE GUARANTEED

WHEN MADE . . . WHEN MIXED . . . WHEN FED!

Just add a 10 lb. bag of NOPCOSOL to a ton of mix, and your feed will deliver exactly the right vitamin potencies, the right level of antibiotic, the right amounts of trace minerals. It's as simple as that to end worries from underfortification—and do away with manufacturing losses from waste and overfortification. Equally important, you add a new talking point to your feed, because the vitamins in NOPCOSOL will *stay* in your feed. NOPCOSOL vitamin potencies are guaranteed when made . . . when mixed . . . *when fed!*

GUARANTEED STABLE AND DIGESTIBLE

Nopco's exclusive Micratized* Vitamins A & D remain stable in NOPCOSOL, even in the presence of B-vitamins, trace minerals and most "destructive" feed ingredients. Hundreds of stability studies prove it! And, 10 years of research and feeding tests prove complete vitamin digestibility. That's why NOPCOSOL can be guaranteed when made . . . when mixed . . . *when fed!*

EASY-TO-USE 10 LB. "BATCH-SIZE" BAGS

You just add one handy 10 lb. bag of NOPCOSOL to a ton "batch" of your feed. No complicated premixing, no costly errors, and best of all—a simplified inventory. All you need is in the convenient NOPCOSOL bag (shipped 4 bags to a handy, easy-to-store carton). "Batch-size" is the new, easier way to fortify your feeds!

FREE BOOKLET! "NEW HORIZONS IN FEED SALES" GIVES ALL THE FACTS ABOUT NOPCOSOL, INCLUDING SUGGESTED FEED FORMULAS →

NOPCO
EVOLVED THRU RESEARCH

NOPCOSOL GIVES YOU IN ONE EASY-TO-USE PRODUCT, GUARANTEED FEEDING LEVELS OF:

VITAMINS: Micratized* Vitamin A, Micratized* Vitamin D, Riboflavin, Pantothenic Acid, Choline, Niacin, Vitamin B_{12}

ANTIBIOTIC: Procaine penicillin (for poultry), Aureomycin (for swine)

TRACE MINERALS: Iron, Iodine, Manganese, Copper and (in swine feeds) Cobalt

Available in Eight Convenient Formulations for Poultry, Turkey and Swine Feeds

MAIL THE COUPON NOW!

Agricultural Department
NOPCO Chemical Company
First & Essex Streets, Harrison 1, N. J.

Please send me the NOPCOSOL booklet and prices and complete information about the NOPCOSOL program.

Name.....
Firm Name.....
Street & No.....
City..... Zone..... State.....

NOPCO CHEMICAL COMPANY
Harrison 1, N. J. Richmond, California

© 1952 NOPCO Chemical Company *T.M. of NOPCO Chemical Company

EXCLUSIVE PRODUCERS OF MICRATIZED* VITAMIN PRODUCTS

representative intimately, and this makes it relatively easy to put off payment of the account.

On the other hand, if you use too much collection pressure, your competitor gets the farmer's business, and you have a two or three months' bill to collect.

These are a few of the observations I have made in cooperating closely with our several feed dealer customers. I have concluded that good credit judgment combined with sound answers to credit problems is one of the most important factors in a successful feed dealer's operations.

2. A few of our credit experiences with our feed dealer customers:

About eight years ago, when we started our farm loan department, we concluded that a close relationship with feed dealers would be mutually beneficial. Since then our working relations with feed dealers have proven to be very valuable to us, and we hope of some benefit to them. Our decision as to credit extension is influenced by the dealer's opinion of his customer, because he usually knows well the quality of the farmer's operation and his ability to pay. Often this knowledge results from several years' observations and servicing of his customers' account.

One dealer in our area came to us about six years ago and told us he was worried about his accounts receivable. He gave us three years' statements for analysis. It appeared that all factors of his business were favorable, except that in building an expanding business, the accounts receivable had gotten out of line.

As I remember, the aging of accounts receivable showed an average of about 70 days. It was necessary for the dealer to borrow to finance inventory. He also wanted to know how we could help him to get the average of his accounts receivable down to 40 to 45 days, which would be more in line with a reasonable credit basis.

First, we sat down and went over each account. We discovered that about 10% of his business was slow, and with farmers of questionable ability. Also, we came to the conclusion that a large part of his time was being spent on collections and service of this small number of his customers; the result being that he could not devote sufficient time to getting new and good customers.

Out of several meetings we finally decided that he would be better off without this 10% of business and that the necessary pressure to collect should be used. We offered him a low five figure line of credit for inventory, to be paid in three to six months. In addition we offered him a $10,000 line of credit for his slow accounts. He agreed to buy back any notes which were not paid by the customers, thus eliminating any undue collection expenses to us. Care was used to see that the monthly payments were not too large, and none ran for more than 18 months.

Candidly, we were not sure this plan would work, and we decided to try it for one year. We have since renewed this agreement each year for five years. We have discounted a total of 70 notes for $55,580 over this period of time. Only three of these notes have been repurchased by the dealer. All others have been handled satisfactorily.

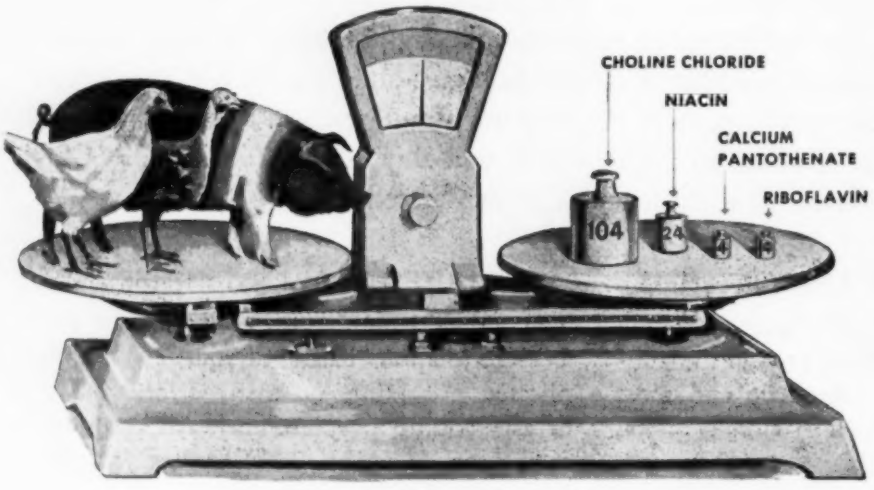
This plan has proven mutually beneficial. Our bank has had reasonable earnings on these accounts with a minimum of expense and trouble. Today the firm's accounts receivable are down to 40 to 45 days, reduced in volume by about 50%. A few customers have been lost, but this, too, has been beneficial, since they are now giving a competitor a headache.

3. How we analyze credit: We follow a definite pattern or program of

Call
Van Dusen Harrington Co.
for Barley, Oats, Corn
BUSINESS FOUNDED 1852
MINNEAPOLIS Pv DULUTH

No. 93—Vitamin Mixture Merck

A convenient, economical, and effective way to add a nutritionally balanced ratio of essential vitamins



OTHER IMPORTANT MERCK PRODUCTS FOR THE FEED INDUSTRY:
PRO-PEN*
"4"
PRO-PEN* with B_{12}
"2:3"
No. 54—Riboflavin Mixture
No. 52 S—Calcium Pantothenate Mixture
Niacin
Sulfaquinoxaline
*PRO-PEN is the trade-mark of Merck & Co., Inc. for its brand of procaine penicillin feed supplements.

No. 93—Vitamin Mixture Merck is designed especially for fortification of swine rations. Each pound contains 4 Gm. Riboflavin; 4 Gm. Calcium Pantothenate Dextrorotatory, Feed Grade; 24 Gm. Niacin; and 104 Gm. Choline Chloride. These quantities and ratios conform with recent recommendations of swine nutritionists.

This easy-to-use Mixture also finds application in certain poultry formulations.

Research and Production for Better Poultry and Animal Nutrition

MERCK & CO., Inc.
Manufacturing Chemists
RAHWAY, NEW JERSEY
In Canada: MERCK & CO. Limited—Montreal

EDWARD E. SMITH AND CO.
48 Years of Dependable Brokerage Service
402 Glenn Bldg. Atlanta, Ga.
LD-132 Walnut 8417-8 TWX AT-30

Ray Ewing PRODUCTS
Distributed in Southern Missouri, Arkansas, Oklahoma and Texas *by*
The Tommy Thompson Co.
3617 Dryden Road
FORT WORTH, TEXAS
Telephone: Webster 0005
QUALITY GOES IN BEFORE THE NAME GOES ON

HIAWATHA GRAIN COMPANY
910 GRAIN EXCHANGE
Minneapolis 15, Minn.
For POULTRY WHEAT SCREENINGS
Ground or Unground
FEED BARLEY
FEED OATS
Wire or write for prices

COLBY MILLING INC.
Feed Mixers Products
Phone 160 or 166
TWX Colby 28
Robinson Code
PULVERIZED OATS
Feeding Rolled Oats
COLBY WIS.
GROUND GRAIN & GRAIN PRODUCTS

credit investigation that may be of interest to you. It probably is easier for us to get financial information, because we will not discuss a loan with a prospective customer unless he gives us a full and complete picture of his assets, liabilities, gross and net income.

With new customers we visit the farm before we approve a loan. The purpose of our visit is to observe housekeeping on the farm, the condition of the buildings, tools, fertility of soil, quality of crops, the productive capacity of livestock, conditions and care, and the farmer's general know-how is carefully noted. We also are interested in noticing the family's cooperation because an able and capable wife is an important influence in the successful operation of a farm business. Again we note the kind of grain and feed used so that we can check with the dealer as to credit, ability, etc., as previously stated.

We also check town records for liens and chattels, and discuss credit ability with the town clerk. They are helpful since in small communities they usually know the history of most residents. Other valuable sources of credit information are our own customers, the local grocery store, farm machinery dealers, the milk dealer for wholesale dairy farms, and the poultry dealer for poultry farmers. Generally we would rather have one good and proven source of information than a half dozen mediocre ones.

After all available factual information is gathered together, we then ask ourselves the following questions:

(1) Will the proposed loan increase income the better to repay the loan?

(2) Is the repayment schedule safely within the ability of the customer to meet the payments?

(3) If currently not bankable, can we assist in any way to make the request bankable?

(4) Will we be able to continue to extend credit through good and bad times over a period of years?

4. The unfavorable results of too much credit to the dealer and the farmer:

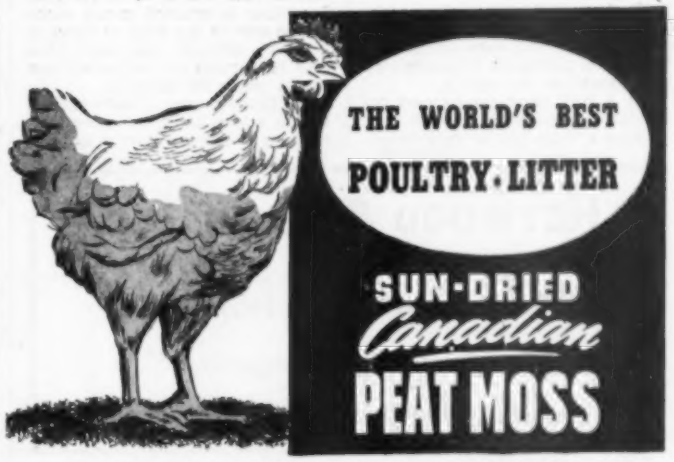
All of us know that a too large amount of accounts receivable in relation to the volume of sales can weaken the financial stability of a feed dealer. Only constant vigilance and the exercise of continued good credit judgment can keep these items in hand.

It sometimes becomes necessary for any of us handling credit to tell our customer, "You have had all the credit that is available, and from now on, it is necessary to reduce obligations." This problem is part of good credit procedure, and it often is not easy to convince our customer that our decision is sound and reasonable. The ability to say "no," and make our client like it, requires a high quality of salesmanship. It is, however, one of the necessary requirements of both the banking and feed business.

After about 20 years in farm credit work, I have come to the conclusion that the granting of too much credit can do more harm to a farmer than the refusal of credit. One of the responsibilities that goes with granting of credit is a recognition of the value of credit as a tool for increasing income, and the damage that can be created by too much credit. Too easy credit helps to create a rapid expansion of farm business often to the detriment of both dealer and farmer.

5. A few suggestions that may help a feed dealer to get additional services out of his local commercial bank:

(1) Source of financial help: Presentation of yearly statements of balance sheet and operating figures will give the banker confidence in repay-



CANADIAN PEAT PRODUCERS ASSN., VANCOUVER, B. C.

NOPCO PRODUCTS
Dealers in Minnesota, North Dakota and Western Wisconsin
Write for Prices and Information to
MANEY BROTHERS MILL & ELEVATOR COMPANY
MINNEAPOLIS Distributors MINNESOTA

TRANSIT STORAGE
of MILL FEEDS and FEED STUFFS
MIDLAND WAREHOUSE CORP.
Waldheim Bldg., Kansas City, Mo.
Warehouses:
Kansas City, Santa Fe Trackage
Oelwein, Iowa. C.G.W. Trackage

...it's Economy wise to
JERSEEize...
with JERSEE VITAL-MIN
Builders of Vitamin and Mineralized concentrates since 1923.
The JERSEE Co. MINNEAPOLIS MINN.
Jobbers and Warehouses from Coast to Coast

AGRICULTURAL DEPARTMENT NOPCO
25th YEAR OF VITAMIN PIONEERING FOR THE FEED INDUSTRY
HARRISON, N. J.

MICRATIZED*
MICRATIZED*
MICRATIZED*
MICRATIZED*
MICRATIZED*
A name that has come to mean the very finest stable vitamins A & D—
tested — proved — GUARANTEED!

Leading feed manufacturers are your best proof of the superiority of NOPCO Micratized Vitamins A & D. Many of them rely exclusively on "Micratized" for their toughest feeds, where stability is a costly problem. Many more are choosing "Micratized" for *all* their feeds because Micratized Vitamins A & D are not only *stable*, but are *completely available* nutritionally. All of NOPCO's vast resources have gone into making "Micratized" the standard of comparison for stable vitamins:

STABILITY Test after test — by NOPCO, by feed manufacturers — prove Micratized A & D vitamins completely stable. Whatever your stability problem — pelleting, shelf life, "difficult" feed ingredients — depend on "Micratized" to retain potency where others fail.

DIGESTIBILITY NOPCO's exclusive process utilizes edible microcrystalline wax, assuring complete vitamin digestibility. Ask to see results of actual feeding tests for unbiased proof.

LOWER TRUE COST "Micratized" vitamins *save* the cost of overfortifying feeds. You need no excess amounts! NOPCO stable vitamins stay intact in feeds until *fed*. Compare cost-in-use savings of "Micratized" vitamins with vitamin A oil and ordinary dry forms.

A COMPLETE LINE For all types of 4-footed animal and poultry feeding, there's a Micratized product, proved, accepted, in potencies to exactly fit your needs.

Write today for FREE copy of the NOPCO Vitamin Guide, which gives exact potencies of NOPCO Micratized vitamin products.

RELY on these Quality Products for your feeds
NOPCO A & D VITAMINS
A complete line of Micratized* dry Vitamin A & D products, conventional dry vitamin A & D products, vitamin A & D oils.
NOPCO B VITAMINS
Riboflavin, calcium pantothenate, niacin, choline chloride (liquid & dry), vitamin B_{12} feed supplement.
NOPCAINE
Antibiotic feed supplement (Procaine penicillin).
NOPCOSOL
Complete vitamin-antibiotic - trace mineral feed supplement.
NOPCO
EVOLVED THRU RESEARCH

NOPCO CHEMICAL COMPANY
Harrison 1, N. J. Richmond, California
©1952 NOPCO Chemical Company
*T.M. NOPCO Chemical Company
EXCLUSIVE PRODUCERS OF MICRATIZED* VITAMIN PRODUCTS

ment ability on a fairly quick repayment plan.

(2) Source of credit information: A local bank has access to a great deal of credit data that can be useful to their customers. This data may be obtained by the asking.

(3) A local bank can be used for collection purposes at a small cost.

Often a bank can be used to collect a note or draft on a more convenient basis than by direct methods. Sometimes a returned unpaid check can be sent to the bank on which it is drawn through your local bank with instructions to hold for ten days to two weeks for collection.

(4) Establishment of indirect credit with a local bank will permit discounting of customers' notes or trade acceptances. In some cases the item may be paid more promptly if payments are made to the bank.

I believe that in the future your good customers and you will find it advantageous to use more bank credit. I would like to suggest that you visit your local bank and talk over some of your credit problems with your banker. You will not always get all that you may wish, but I am sure that you can get more help from your local banker if you ask for assistance with some of your credit problems.

Two or three visits a year, particularly when you do not need money, or before you will need it, help to establish confidence on the part of the banker.

In conclusion, I believe the feed dealer will continue to be the "banker" as long as he is in the grain and feed business. The only relief that I can see from this situation is to transfer as much of your credit as you can to your local bank.

J. E. BROWNLEE RENAMED HEAD OF GRAIN GROUP

CALGARY—J. E. Brownlee, Quebec, was re-elected president of the United Grain Growers, Ltd., at the annual meeting of the company here. Reelected first vice president was R. C. Brown, Winnipeg, and J. H. Lane, Filmore, Sask., was renamed second vice president.

A profit of $575,322 for the fiscal year ended July 31, 1952, compared with $561,621 the year previous, was reported to farmer delegates attending the annual meeting. Mr. Brownlee said the profit resulted after $950,000 was allocated for patronage dividends on grain deliveries during the year. Provision was made for depreciation of $733,717, and for taxes of $690,000. Regular annual dividend at the rate of 5% on capital stock also was provided.

The firm's receipts for the past year were at a new high, and the number of shareholders at 48,000, was near a record. Three hundred farmer delegates attended the two-day annual meeting.

VALUE DOESN'T IMPROVE

Plainly-bred cattle do not improve in value with extraordinary fatness, say officials of Michigan State College. High grade cattle tend to rise in grade and price as desirable finish accumulates, according to the college.

HEYWOOD & RABB, INC.
Brokers • Jobbers • Carriers
Serving the Entire Southeast
"May we have your offerings?"
LD 382-2096 MORRISTOWN, TENNESSEE TWX 463

The One Medication for your Starting and Growing Feeds and Broiler Rations

nfz NITROFURAZONE MIX

For the Prevention and Treatment of COCCIDIOSIS
(CECAL AND INTESTINAL)

You can help your customers get their chicks off to a good start by medicating your starting feeds with nitrofurazone to prevent coccidiosis before it strikes.

Your starting and growing feeds medicated with nitrofurazone are ideal for farm flocks as well as broiler flocks because there is no interference with the development of natural immunity.

Continuous use of nitrofurazone in your growing feeds (*at the same level*) will provide protection from coccidiosis during the danger period. By medicating your feeds with nitrofurazone, your customers will have less trouble from outbreaks of chronic coccidiosis because nitrofurazone allows birds to build a more solid immunity to the more chronic forms of coccidiosis.

Nitrofurazone has been proved consistently effective and economical in helping to raise faster growing, more profitable birds with fewer runts or culls, fewer death losses.

For better, more vigorous, healthier birds medicate your feeds with nitrofurazone and provide protection against coccidiosis.

nfz MIX
Also available with ARSONIC GROWTH STIMULANT for BROILER FLOCKS

NFZ-MIX in combination with Arsanilic Acid makes it possible for you to offer your customers a feed with many additional advantages. NFZ-MIX is also compatible with other commonly used arsenic compounds.

This compound in your feeds assures:
- High Feed Efficiency
- Faster and More Even Feathering
- Better Growth
- Better Pigmentation
- Proven Protection against Coccidiosis

*Your feeds medicated with the combination of NFZ-MIX and ARSONIC GROWTH STIMULANT mean better profits for YOU AND YOUR CUSTOMERS.

FOR... COMPLETE DATA AND RESULTS OF MANY TESTS WRITE

DR. HESS & CLARK, INC.
ASHLAND, OHIO
Scientific Farm-aceuticals since 1893

Distributed in Canada by N. D. Hogg, Ltd., 1854 Yonge St., Toronto, Ontario

KAFIR & MILO
Largest Dealers in Southwest
MID-CONTINENT GRAIN CO.
Kansas City, Mo.

RILEY
BROKERS— COMPLETE LINE OF FEED INGREDIENTS
825 BOARD OF TRADE KANSAS CITY 6, MO. BALTIMORE 2000

Brew-molass
BREWERS' GRAINS and MOLASSES
THE NEW CENTURY CO.
3939 S. Union Ave.
Chicago 9, Ill.
PHONE: Yards 7-1903

for Quality Results at Low Cost
IT'S RED COMB POULTRY FEEDS
Write today for FREE Red Comb Production Manual!
HALES & HUNTER CO.
141 W. Jackson Blvd., Chicago 4
MILLS AT: CHICAGO, ILL. MARSHALL, MO
WILMINGTON, DEL. LEXINGTON, KY.

WHAT IS EGGLAC?

It's the output booster for sustained high egg production

it's the SALES BOOSTER for MASTER MIX DEALERS

THIS NATIONALLY KNOWN Master Mix Specialty Feed helps increase egg mash sales the year around.

- It's part of the complete Master Mix Program to assure high egg profits.
- It gives you satisfied customers. As the appetizer which helps sustain high egg production, EggLac makes friends for you.
- It increases regular Egg Mash business. EggLac promotes flock health which increases mash intake for greater egg production.
- It brings in new business. Folks coming to you for EggLac are prospects for other feeds, too.
- Your local EggLac promotion is backed by National Advertising which makes your own advertising more effective.

Sales helps shown in box at right are yours free. Ask your Master Mix salesman.

SALES HELPS
READY FOR YOU NOW

1. EggLac four-color Poster
2. Colorful Egg Mash Poster
3. Cut-outs for EggLac and Egg Mash
4. New EggLac Folder for your Nutrition Board . . . tells the whole story
5. Direct Mail Letter on YOUR Egg Mash
6. Newspaper advertisement mats on EggLac and Egg Mash
7. Two-color ads in State and National farm publications
8. Master Mix Promotion Guide showing how to use them

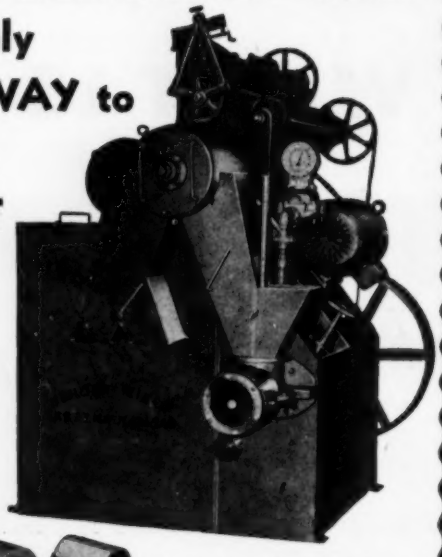
If you are not now a Master Mix Dealer and would like to know more about our feeds and sales helps, write us.

MASTER MIX FEEDS

McMILLEN FEED MILLS
Memphis, Tennessee

Combination HI-MOLASSES PELLET MILL and MOLASSES FEED MIXER

The Only SURE WAY to MORE PROFIT Through Features Exclusive with Wenger



Here Is One Feature

New models of the 1000 Series shown above are now coming off our production line with this new and exclusive head which takes light weight screenings as well as heavy type feed and makes a more firm, solid molasses pellet. 2000 Series is exactly the same as the 1000 Series except that it has twice the capacity.

SEND TODAY FOR CIRCULAR WITH ALL DETAILS. CIRCULARS ALSO AVAILABLE ON OTHER WENGER PRODUCTS BELOW
Hi-Molasses Pellet Mills and Molasses Feed Mixers - Pellet Coolers
Feed Grain Steamers - Metered Flow Pumps

WENGER MIXER CO., Sabetha, Kan.
EXPORT DIVISION: 301 Scarritt Arcade Bldg., Kansas City 6, Mo.
World's Finest Molasses Mixing and Bulk Delivery Equipment

Practical Public Relations

A FEEDSTUFFS FOR THE RETAILER FEATURE

By Paul Lockwood

Feed and grain dealers know how important public opinion is to the future success of their business. Yet, the cost involved in determining what the public thinks about the business is more than the average feed merchant thinks he can afford to invest in anything so intangible.

Research organizations and public relations counsels will conduct public opinion surveys for any feed or grain dealer. However, for an average size community the cost of such a survey would be well over one thousand dollars — larger cities or areas higher in proportion.

Thus survey expense can be charged off as an expense of doing business, but the returns—tangible returns—would be much harder to measure than a similar expenditure for advertising.

Here is an inexpensive way to determine to a certain degree how you stand public relations wise. Check each of these self-analysis questions that you can honestly answer "yes"; multiply the number of checks by ten; and you will have your public relations score in your community.

— Do you belong to and actively participate in at least one local organization? (church, lodge, service club, etc.)
— Have you or has some member of your organization given a talk before some local group during the last year?
— Do you know the "nickname" your employees and other people in the community have for you?
— Do you call all of your employees by their first name?
— Do you pay salaries that are equal or better than the local wage scale?
— Do you know the names of all the salesmen who call on you regularly?
— Do you know your local newspaper publisher personally?
— Do you keep your newspaper informed of your personal and business activities that are newsworthy?
— Has some news item about you or your organization been published in your local newspaper during the last month?
— Do all of your customers know your business policies on hours, adjustments, credit and service?

If there are some questions on this

MIX BETTER FEEDS . . . at LOW cost per ton!

1 POUND FORTIFIES A TON of FEED

HERMAN NAGEL'S TRACE MINERAL CONCENTRATE

. . . Supplies properly balanced amounts of stabilized iodine, manganese, copper, cobalt, nickel, iron, boron and zinc.
Write for complete information

THE HERMAN NAGEL CO.
53 W. Jackson Blvd., Chicago 4, Ill.

for thirty years

PILOT BRAND OYSTER SHELL

FOR POULTRY

This trusted symbol has represented purity and profit to poultry feeders everywhere, for maximum egg production.

Leading feed dealers rely on Pilot Brand Oyster Shell for sustained quality, feeder satisfaction and profits to them, constantly stimulated by powerful National Advertising in farm papers and radio.

The familiar blue Pilot Wheel trademark will continue to be their guarantee of satisfaction and repeat sales.

OYSTER SHELL PRODUCTS CORP.
New Rochelle, N. Y. St. Louis, Mo.

the REASONS for

PERMADRY*

SUPERIORITY

*An outstanding stabilized "Sealed-in" Dry Vitamin A product

1 PERMADRY STABILITY

Only protected, stabilized and sealed-in Vitamin A can possibly be kept stable in your feed. PERMADRY will keep Vitamin A sealed in and protected against destructive ingredients in your feed mixtures.

2 PERMADRY AVAILABILITY

PERMADRY is so designed in make-up that animals have no difficulty in absorbing the Vitamin A present. Extensive availability tests have amply proven the complete availability of Vitamin A from PERMADRY to Poultry and 4-footed Animals.

3 PERMADRY EFFICIENCY

Feeding tests conducted by independent laboratories and well recognized Feed Manufacturers have proven the great efficiency of Vitamin A from PERMADRY to such an extent that feeding costs were significantly and consistently lower than other feed mixtures in which unprotected Vitamin A products were used.

FOR BEST RESULTS IT PAYS TO USE PERMADRY

*U.S. Patent No. 2496634 Reg. T.M.

STABILIZED VITAMINS, INC.
57-59 Commerce St.
Brooklyn 31, N. Y.

NEW FORMULAS PRODUCE... FASTER GROWTH ...Lower Feed Costs!

WITH Blatchford's

SWINEX

SOURCE OF

VITAMIN B12 and ANTIBIOTICS

GOOD TO THE LAST DROP — ESTABLISHED IN 1890

Plus other important vitamins and rare minerals—all in one economical, easy-to-use package!

Write Today for Formulas

Blatchford's ESTABLISHED IN 1890

Main Plant and Offices WAUKEGAN, ILL. Midwest Plant Des Moines, Iowa West Coast Division Nampa, Idaho

The easiest, surest way in the world to kill rats and mice is with genuine

BANARAT BITS

—ready-to-use bite-size pellets, made with warfarin and special appetizer. Work like magic! Will not sour or turn rancid. Insist on BANARAT BITS or BANARAT PREMIX concentrate at your dealers. Made and guaranteed by American Scientific Laboratories, Box 232, Madison 1, Wisconsin

self-analysis quiz that cannot be answered either "yes" or "no" it will indicate that some personal investigation is necessary. On the points that were answered "no" there is an indication that something should be done to improve this phase of your public relations program.

Three of the most important phases of this quiz have to do with talks before civic groups, personal printed publicity and employee relations. If these three parts of your public relations program are functioning properly you will be able to accomplish the other parts quickly and easily.

Here are some suggestions on these three essential parts of a public relations program for a feed and grain dealer:

Give Talks Before Groups—Many feed dealers balk on this point. It may be fear of large groups, a feeling of not having anything new to say, or a lack of skill in putting words together for an inspiring or informative talk.

Actually, it is not necessary for a feed merchant to be a regular spellbinder. In most talks the idea is far more important than the words used. And there are plenty of ideas that feed and grain dealers have that many people would be glad to hear.

For instance, an interesting talk could be prepared on how to control rats. Many of the unusual devices and methods employed to kill rats would be of interest to most listeners, and would tie in with the feed dealer's business in a subtle public opinion molding way.

Another talk that a feed and grain dealer might give to rural communities is on the operation of the grain exchange and the marketing process of grain. Perhaps this could be illustrated with slides or a movie furnished by the public relations department of a miller or the grain exchange.

Or, if you want to leave business out of the talk there are plenty of other interesting subjects. Giving a talk about some "pet" subject—hunting, fishing, travel, stamp collecting, antiques, or any other subject should be easy for a feed dealer who is sincerely interested in the topic. Then, too, there are local fund raising campaigns or political activities that give a feed retailer an opportunity to improve his local public relations program.

Feed and grain dealers with progressive public relations programs are frequently called on to talk before their state or national group or association. For these talks the feed dealer may want to hire a ghost writer to prepare his speech, but the practice and skill he has developed in delivering his talks before small local groups will stand him in good stead for the big occasion.

Take an Interest in Employees' Problems—Public relations begins at home, and the way your own employees think and talk about you

4 OUT OF 5 NEED AND GET HELP

Join THE MARCH OF DIMES

ALL 5 BENEFIT

JANUARY 2 TO 31

a preferred carbohydrate for feeding...

HYDROL

(feeding corn sugar molasses)

High in total digestive nutrients

Does not crystallize

CORN PRODUCTS REFINING COMPANY

17 Battery Place • New York 4, New York

YOU AND BARKER'S—
A GOOD BUSINESS TEAM!

Let's get ready now for 1953. Your customers, of course, will want the best possible feeds at the lowest possible price. To you, that means *laboratory-formulated* feeds—and feeds *supplemented* with the finest Minerals, Vitamins and Antibiotics available.

SINCE 1851

Now here's a combination for you that can't be beat. Team up with BARKER'S and the BARKER LABORATORY. Get *both* formulas and supplements from *one* source.

Why don't you call or write us right away? There's no obligation.

SPECIALISTS TO THE FEED TRADE

BARKER, MOORE & MEIN Co.

541 NORTH ORIANNA ST. PHILADELPHIA 23, PA.

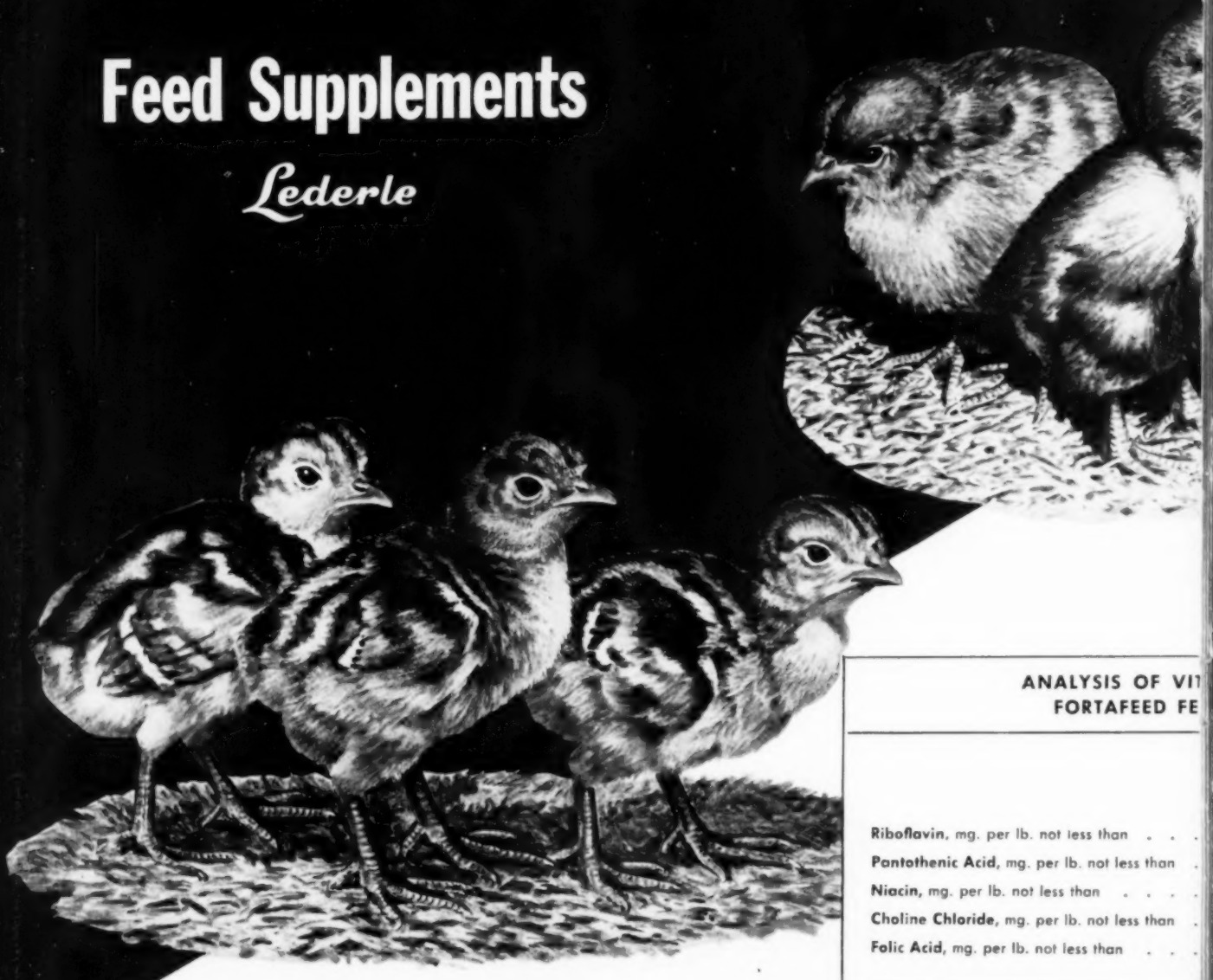
Multiple B VITAMIN content

That's what you assure your customers when your feeds contain blended, premix

FORTAFE

Feed Supplements

Lederle



ANALYSIS OF VI
FORTAFEED FE

Riboflavin, mg. per lb. not less than	. . .
Pantothenic Acid, mg. per lb. not less than	.
Niacin, mg. per lb. not less than	. . . .
Choline Chloride, mg. per lb. not less than	.
Folic Acid, mg. per lb. not less than	. . .

for top feed performance!

s

ked

ED*

This is the easy, low-cost, convenient way to put "top performance" into your feeds!

Incorporate FORTAFEED Feed Supplements into your feeds *now* and supply your customers throughout 1953 with not *one* B vitamin, but *several!* Provide your customers with the *adequate* B vitamin content so necessary for fast, uniform growth and high feed efficiency in livestock and poultry.

Poultry and swine nutritionists today are agreed that the addition to feeds of riboflavin *alone* is not the complete answer to adequate B vitamin fortification. Pantothenic Acid and Niacin are also *musts*... and Choline Chloride and Folic Acid are frequently necessary.

Listed in the table on this page are five FORTAFEED Feed Supplements. Two of these are *new* and have been recently introduced by *Lederle* so that you may offer your customers even wider service in supplying B vitamin protection.

Each FORTAFEED Feed Supplement contains three, or more, of the B vitamins. All are conveniently blended to premix. All are easy to mix — saving time, labor and money. All are uniform and highly stable in potency. All are sufficiently concentrated for economical transportation and handling.

FORTAFEED Feed Supplements are made with a base composed of dried fermentation solubles and press cakes from the manufacture of riboflavin and aureomycin, together with extracted liver meal and soybean oil meal. These supplements are not just mixtures of the B vitamins.

FORTAFEED Feed Supplements are available to feed manufacturers only. WRITE FOR PRICES AND FULL INFORMATION.

*Reg. U. S. Pat. Off.

'AMIN CONTENT OF ED SUPPLEMENTS

FORTAFEED FEED SUPPLEMENTS				
			(new)	(new)
2-22	2-22C	2-49C	2-2-12-50	2-49-90
2,000	2,000	2,000	2,000	2,000
2,000	2,000	4,000	2,000	4,000
2,000	2,000	9,000	12,000	9,000
—	10,000	10,000	50,000	90,000
—	60	60	—	—

Animal Feed Department

LEDERLE LABORATORIES DIVISION

30 Rockefeller Plaza — AMERICAN Cyanamid COMPANY — New York 20, N. Y.

• • • Dealers: Here is a QUALITY product . . . priced for ECONOMY . . . yet it gives you a GOOD PROFIT. Sell it with a MONEY-BACK GUARANTEE!

Makes Calves BIG and HUSKY

NEAR'S QUAL-ECON Quality-Economy SINCE 1899

Milk-Saver CALF FOOD

. . . the concentrated feed, high in digestible nutrients—properly balanced in protein, fat and carbohydrates. Contains TWO Antibiotics—Aureomycin and Terramycin—Vitamin A, Sunshine Vitamin D, B-Complex Vitamins, including Vitamin B_{12} Supplement.

Made by Near's, pioneers since 1899 in feed supplements, pioneers in the field of multi-mineral supplements. The Near's line includes MinRaltone, DiJex-Tone, FastGain 45% Pig and Hog Concentrate, and it's backed by a comprehensive year-around program of newspaper, radio, direct mail and display advertising where they will do the best job for YOU—right in your own home territory.

Near's Products Give YOU Greater Profits . . . Because They Give YOUR CUSTOMERS Greater Profits

Send this coupon for information on the Greater Opportunities with the Near's line.

NEAR'S FOOD CO., INC. BINGHAMTON, N. Y.

Name.....

Company.....

Address.....

(SINCE 1908)

FARMERS FRIEND

TRADE MARK REG. U. S. PAT. OFF APRIL 30, 1907, NO. 62,380 OCT. 8, 1946, NO. 424,933

all-purpose

MINERAL FEED

an economical source of high grade and well-balanced

TRACE MINERALS

Contains important mineral elements blended with COBALT, MANGANESE, ZINC, BORON, IRON, COPPER, STABILIZED IODINE and other trace minerals in carefully calculated proportions to supply necessary mineral nutrition.

Also Contains LIQUID BLACKSTRAP MOLASSES IRRADIATED YEAST (Source of Vitamin D_2)

We Sell Through Dealers and Jobbers Warehouses from Coast to Coast

By the TON, TRUCKLOAD or CARLOAD

Write Today Regarding Our Dealer or Jobbing Proposition

FARMERS FRIEND MINERAL CO. NAPOLEON, OHIO

FEEDSTUFFS—*The Feedman's weekly newspaper*

118 So. 6th St. Minneapolis, Minn.

Serves The Growing Feed Industry

"I'm letting you in on a super secret design—keep mum until we hit the market next spring."

will have a definite bearing on what the public at large thinks. By developing a friendly spirit of cooperation in the organization, a feed dealer can improve his local public relations a great deal.

One of the questions in the quiz, "Do you know the nickname your employees have for you?", is most revealing. If you do the nickname your employees have for you, chances are it is not "Moneybags," "Simon Legree," or "Scrooge." However, if you do not know your nickname it is possible that this part of your public relations program needs something done to build it up.

Most public relations minded feed and grain dealers realize that employee relations are a vital part of their overall program to build public confidence in their firm. Spending a little time in getting better acquainted with your employees and their problems will build a spirit of teamwork that will pay off in more profits for you.

Get Personal Publicity—As a general rule the public does not like a publicity grabber. However, they do like to know what other people are doing and will read legitimate news stories about local businessmen.

Publicity, to be most effective, must be favorable. A news story about the convention activities of a feed dealer might or might not be good public relations. A stunt designed to get publicity from a feed merchant that is in good taste, has news value, and is interesting will be a sure hit for space in the local newspaper.

Some representative of the local newspaper calls on you for advertising. During these talks about future advertisements there is always the opportunity to plant the idea about something you have done that is interesting to the reading public.

Newspapers are published to serve the needs of the people in the community. They want advertising—they want news—and a feed and grain dealer is able to supply them with both—so the mutual benefit to the feed retailer and to the newspaper is there in good publicity.

Feed dealers who have discovered that their public relations score is below average can improve the local public opinion on their firm by: (1) giving talks, (2) taking an interest in employee problems and (3) getting personal publicity.

SALES MEETING HELD BY MARITIME MILLING

BUFFALO—Dr. E. P. Singsen, head of the poultry husbandry department, University of Connecticut, discussed experiments in the field of high-efficiency rations at the annual two-day sales convention of the Maritime Milling Co. at the Buffalo Athletic Club.

He also spoke on high-efficiency diets used with growing birds and mash feeding systems compared to mash and grain diets. Dr. Singsen's talk was followed by a panel discussion. Members of the panel were Dr. Singsen; Dr. L. N. Gilmore, head of the Maritime Milling testing farm, East Aurora; Mrs. S. A. Weidman and S. F. Dixon.

J. M. Beiermeister reviewed developments at the Van Hornesville dairy testing farm, and Dr. Gilmore discussed the progress and experiments at the East Aurora testing farm.

FEEDING TO FATTEN CATTLE

Daily gain of less than 1.5 lb. in cattle usually is not considered as feeding, or fattening, while 2.5 lb. or more is unusual, according to officials of the Michigan State College Department of Animal Husbandry. Cattle in thin flesh gain more rapidly and economically but require longer feeding for a given finish.

THEO. STIVERS
Broker
Raw Materials to the Feed Industry
1527 Candler Bldg.
Atlanta 3, Georgia

Ray Ewing PRODUCTS

Distributed in Illinois, Indiana, Ohio and Southern Wisconsin *by*

HALL SALES COMPANY
1313 Ridge Avenue
Phone: Greenleaf 5-0225
EVANSTON, ILLINOIS

QUALITY GOES IN BEFORE THE NAME GOES ON

SOYBEAN OIL MEAL
HOMINY FEED
MILLFEEDS

THE NELLIS FEED CO.

Strictly BROKERS *Strictly*

ALFALFA MEALS
OAT PRODUCTS
MOLASSES

ST. LOUIS, MO., 405 Merchants Exchange
Chestnut 1122 TWX 237

CHICAGO, ILL., 3832 Board of Trade
Wabash 2-7322 TWX 623

KANSAS CITY, MO., 1016 Baltimore Bldg.
Harrison 1801 TWX 144

A beautiful blonde opened the door in response to a salesman's knock.

"Good morning," he beamed. "May I speak to your husband for a moment?"

"I'm sorry. He's away on business and won't be back for three weeks."

The salesman took another look at the stunning creature. "That'll be all right," he murmured, "I'll wait."

◆ ◆ ◆

Doc: "Did the medicine I gave your wife straighten her out?"

Hubby: "Yes, I buried here yesterday."

◆ ◆ ◆

A woman got on a bus in a western city and immediately started bothering the driver about a certain street.

"Are you sure this bus stops at Palm Drive?" she asked.

"Yes, ma'am," replied the driver.

A few moments passed.

"You're sure there's no danger that we'll go past Palm Drive?" she insisted to the driver.

"No, ma'am," politely replied the driver.

"But just how will I know when we get to Palm Drive?" again queried the woman.

"Just watch my face," said the driver. "You'll be able to tell by my smile."

◆ ◆ ◆

Tremblechin: "Sir, my wife—er—told me I much ask you for an increase."

The Head Man: "So? Well, I'll ask my wife if I can give you one."

◆ ◆ ◆

When my mother caught my little brother in his first lie, she was so distressed that she told him to leave her sight and not call her Mommy again.

After quite a long time, he timidly approached her and said, "Lady, can I call you Mommy now?"

◆ ◆ ◆

A vivacious young Texan shocked her Boston-reared beau by drawing on her gloves as they started down the street on their first date.

"Where I come from," chided the young man, "people would as soon see a woman put on her stockings in public as her gloves."

"Where I come from," retorted the young lady, "they'd rather."

◆ ◆ ◆

The official inspected the questionnaire and handed it back, pointing to an empty space. "Here," he explained, "you must fill in the addresses of your parents before they were married."

Disgusted with so much paper work, the candidate replied furiously, "I had no parents before they were married!"

TWINE By The CARLOADS

We Pass The Savings On To You

YOUR COST IS LOWER . . . YOUR PROFIT IS HIGHER . . . when you stock BLUE BOW and BLUE CIRCLE Baler and Binder Twine. Made of 100% Sisal Fibre, fully treated against rodents and insects.

WANTED Salesmen Dealers Distributors Jobbers

We can supply you now at a lower price for immediate delivery or book your order for future delivery with a PRICE GUARANTEE.

Our prices are lower because we have the twine made especially for us in very large quantities and deal directly with the manufacturers. Lowest prices on Rope and Wrapping Twine. WIRE OR PHONE!

BOB STONE CORDAGE CO., Chariton, Iowa

Phones: 524-838 National Twine Distributors

HYTROL CONVEYOR

Lets 2 men do the work of 4-6

Write for literature & prices

FEEDBURO EQUIPMENT CO.

732 CONVERSE BLDG. CHICAGO

BRAN • SHORTS MIDDLINGS

Sacked or Bulk—Any Shipment

DREYER COMMISSION CO.

MEMBERS

KANSAS CITY BOARD OF TRADE

ST. LOUIS MERCHANTS EXCHANGE

Board of Trade, Kansas City 6, Mo., Phone BA 5462

Merchants Exchange, St. Louis 2, Mo., Phone L. D. 179

Statistical Charts Furnished Free. We Handle Futures Trades in Kansas City.

CLO-TRATE

A name to remember for quality vitamin A and D supplements.

White Laboratories, Inc.

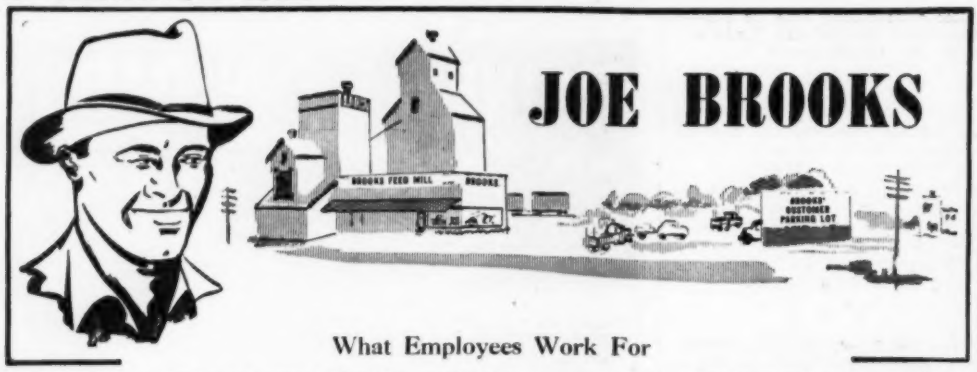
KENILWORTH, NEW JERSEY

tecmangam

changing balance of nature demands new feeder mash formula for profitable poultry raising

Times change. The bounty of changing earth has varied, too, from former nutritive levels. Today, in natural feeds, vital trace minerals often are available in less than desirable amounts. To raise perosis-free flocks that gain weight faster, to reduce shell breakage, to increase egg production and hatchability, feed mixtures should supplement this natural deficiency by providing more manganese. Use at least one pound of free-flowing, non-dusting, easily distributed Tecmangam in each feed ton. Readily assimilated because of its complete solubility, Tecmangam contains 70% manganese sulphate. Be sure . . . be safe . . . fortify each feed ton with one pound of Tecmangam.

Tennessee Eastman Company



JOE BROOKS

What Employees Work For

WHEN Joe Brooks got home from the monthly sales training meeting, it was quite late. His wife, Mary, almost asleep, heard the refrigerator door click, and she knew that this meant Joe would forage for some cake, some pie, maybe a little kuchen and perhaps brew himself a cup of coffee.

In fact, Joe liked to sit up and have a lunch after these training meetings. While he digested the food, he seemed to digest some of the ideas that were always brought out at the meetings.

"I might as well go down and have a snack, too," Mary thought. "What's the use of lying here, waiting for Joe? He's always got interesting things to tell after those meetings. I can always take an aspirin to get to sleep, if I have to."

So she put on her housecoat, tidied her hair a bit, put on slippers and went downstairs.

"Hi, Mary," said Joe. "Glad you came down. I always like company. Want something to eat?"

"Well, maybe a cup of coffee. I see you found everything."

Joe grinned as he tackled a piece of cake. "I know where to find things around here—that is, if the twins don't get ahead of me. Gee, cakes and pies go fast in this house. Why don't those kids eat more potatoes to fill up?"

"Potatoes are high priced now, dear," Mary reminded him. "You've been urging them to eat potatoes for years, when spuds were cheap. Now they cost as much or more than pie or cake."

Joe took a swallow of coffee. "Huh, it sure is a changing world."

Mary sat down, poured a cup of coffee, stirred sugar into it slowly. "Anything interesting happen at the meeting?"

New Stunt

Joe chuckled, rubbed a hand on his knee. "I tried a new stunt tonight, just to get their reaction."

"What was that?"

The feed dealer looked speculative. "Well, you know that Dresser News Letter on business I get out of New York. An article in it said that some employees respond to cash prizes and others to ribbons and honors, and that a business man should find out which worked on whom."

"You mean that some employees would rather be a straw boss than get a raise in pay?"

"Exactly," Joe said. "Prestige counts with some people. I thought I'd try it with my men."

"How did it work?"

Joe reached over and with relish lifted a piece of gooseberry pie out of a pan and lovingly put it on his plate. He took a piece on a fork, put it in his mouth, chewed it, then shook his head with pleasure. "Boy, that's good. Well, on this reward business, I made my men a proposition."

"On what?"

"Selling. I told them that the employee who gets the most new customers for this store by May 1 gets

SPENCER KELLOGG PROTEIN SUPPLEMENT SERVICE

now includes four oilseed meals of the highest quality...
with the addition of Cottonseed Oil Meal, produced at Long Beach, California for the West Coast trade.

We are processors, *not* feed mixers, devoting all our energy to giving the formula feed manufacturer a service in protein supplements that is completely trustworthy. Careful control of our product at every step in processing assures uniform protein analysis and protects the quality and reputation of our customers' brands.

SPENCER KELLOGG AND SONS, INC.
BUFFALO 5, N. Y.

Spencer Kellogg Meal Sales Offices are located at:
Buffalo CL 5850
Chicago FR 2-3437
Decatur 5365
Des Moines 4-7291
Long Beach 67-9530
Minneapolis AT 0309
Philadelphia PE 5-8787

Spencer Kellogg Mills are located at: Buffalo, N. Y. • Bellevue, Ohio • Chicago, Ill. • Minneapolis, Minn. • Edgewater, N. J. • Decatur, Ill. • Des Moines, Iowa • Long Beach, Calif.

SCROGGINS GRAIN CO.
Phone: BR 3913 — Teletype: MP 344
WHOLE and GROUND GRAINS and SCREENINGS
MINNEAPOLIS, MINNESOTA

You Can Count On

CALCIUM CARBONATE COMPANY — TRIPLE CCC QUALITY — PRODUCTS

- Leadership Research
- Quality Control
- Outstanding Facilities
- Quick Service

Trace Mineral Premixes . . . Iodized-Manganesed Calcium (any desired level) . . . Manganesed Calcium (any desired level) . . . Electro (free-flowing) Calcium . . . Pellet Machine Calcium . . . Regular (plain) Calcium . . . Dustless (plain) Calcium . . . Shellmaker Calcium Grit . . . G-220 Riboflavin Supplement . . .

Write—Wire—Phone
Calcium Carbonate Co.
CHICAGO 6, ILL. 222 W. Adams
CARTHAGE, MO. Box 409
OMAHA, NEBRASKA 325 W.O.W. Bldg.

a chance to be vice president and buy a little stock."

Mary looked a little alarmed. "How much stock?" she asked. "Don't sell the twins short."

"They got plenty," Joe said. "I'm only going to sell 5% of the stock to the employee who wins that contest. After all, you, I, the twins, your mother, Uncle Julius and your sister are the only ones who have stock. We can still outvote any of them in the business."

"Well," Mary said, "I hope you know what you're doing. I don't like so many stockholders in this corporation."

Joe chuckled. "We'll see how the new customer plan works. I have a hunch we'll be surprised."

"Who looked interested?"

Another Contest

"I couldn't tell. But I also announced another contest."

"Not something else. How much activity do you want out of one sales training meeting?"

Joe's big hand smoothed back his brown hair. "I am offering $100 first prize and $50 second prize to the employees who sell the most advanced chick orders by March 1."

"That sounds like a lot of money."

Joe shook his head. "Not when you figure that with every chick order we sell feed, medicine and maybe some equipment and litter. And that we have a chance to follow up for growing mash, then laying mash. I'll bet those lads will sell lots of baby chicks."

"But suppose all the employees want to become vice presidents and go after new customers and don't concentrate on chick sales?"

Joe laughed. "Say, you've got a good business head, dearie. That's a sound question. Well, in either case, I win, don't I? If I get a lot of new customers, I make plenty of extra sales with no commission except a title, and that doesn't cost me anything. If all those fellows are looking for is cash, then they'll all concentrate on selling chicks, instead of getting new customers. So I win there, too."

"And you know, too, if your men want to become officers of the company, or just make money on sales contests."

"Right," Joe said, pouring another cup of coffee. "Retailing is moving along so fast nowadays, that I don't want to pass up any bet which will make this a stronger organization. If I've got a good vice president in the making, I want to know it. I want the guy to prove himself. I could use an assistant lots of times. After that vice president has proved himself, I can always give him an increase in pay, if he has earned it."

Mary was silent, and so Joe said, "What's the matter, honey?"

"I was wondering," Mary mused, "if men look on their wives the same as they do on their employees, wondering what makes them tick."

"Why, of course, they do," Joe said. "And the women watch the men, too, don't they?"

"Certainly," Mary agreed, "but there's a big difference."

"How come?" Joe finished his coffee.

"Well," Mary said, "the employees get a reward—cash or ribbons—for their efforts. Wives get—well, what do they get for extra efforts at the wife job?"

Joe chuckled and put Mary into his lap. "Come now," he joshed, "you don't expect me to kiss employees, do you?"

After Joe had released her, there was a starry look in Mary's eyes. "Yes," she wondered, "I guess that's it. Women don't want cash or ribbons or offices. Mostly they'll settle for a kiss. What a world!"

LARGEST SELLING
W-W GRINDER
MODEL F-25-M 35 TO 40 H.P.

This is the grinder that leads the field in efficient, economical operation. A quick, easy change of screens and the F-25-M is ready to pulverize to the required texture. Screens are available with perforations from 1/32" to 2". The 18" cylinder takes tankage, oil cake and other hard materials with exceptional ease. The 18" x 13" feed opening and extra wide throat provide ample room to handle baled alfalfa. Hammers are readily changed with simple pin removal. Dust-sealed bearings need not be keyed to shaft. Heavier construction of this 1,180-lb. grinder allows continuous, hard usage and trouble-free operation that means getting the job done in profit-making time.

Send for Complete Literature

W-W GRINDER CORP. . . DEPT. 311, WICHITA, KANSAS

"We lost valuable selling time until..."

" 'Why don't you turn our problem over to the Dawe's organization? I've seen other feed manufacturers like us get ahead by teaming up with Dawe's. Their service is ideal for our situation.'

"That was my general manager, a 25-year veteran of the feed business speaking.

"Our 'situation' was this: As a result of the many new developments in nutrition, we found ourselves in the position of constantly having to make important decisions on problems of formulation and fortification. Being sales-minded, we realized that this took valuable time we could devote more profitably to selling.

"We decided to 'team up' with Dawe's and put our formula and fortification problems in the hands of specialists.

"Dawe's provided us with a complete nutritional service, beginning with a thorough analysis of our feed line. New and exclusive formulas were developed to meet our special requirements. Their Formula Audit Bureau assumed the continuing responsibility for applying the latest nutritional knowledge to our feeds. We have immediate access to the results of Dawe's research and enjoy the benefits of dealing with a basic producer of feed fortification factors.

"To simplify and improve our fortification, we are using Dawe's Vitamelk Base. Vitamelk provides full fortification in one package. It assures us up-to-date fortification for each class of livestock and poultry feed, and simplifies buying, storing and manufacturing.

"The direct, personal service given us by Dawe's relieves us of worry and helps us operate more efficiently.

"As I said, we're sales-minded. Through our laboratory affiliation with Dawe's, we've improved our feeds and now have more time to concentrate on our real job—selling."

Let Dawe's, the nation's leading vitamin nutritionists, prove to you the efficiency of modern, scientific feed building methods. For more complete details about Dawe's products and professional services, please write on your letterhead. Also ask for your free copy of "Frontiers in Nutrition."

Dawe's **LABORATORIES, Inc.**

(Formerly Dawe's Manufacturing Company)

4800 S. RICHMOND STREET, DEPT. FS-113 CHICAGO 32, ILLINOIS

In Western Europe, Vitamelk is distributed under the name "Vitasource" by Comptoir Anversois d'Importation, "Comanima" 13 Courte rue des Claires, Antwerp, Belgium.

World's Oldest and Largest Specialists in Vitamin Products for Feeds

N. K. Parrish

BROKER JOBBER

• FEEDSTUFFS •

MILO-KAFIR-WHEAT-FIELD SEED

•

LUBBOCK, TEXAS
2-8787

•

FT. WORTH, TEXAS
FOrtune 4031

Ray Ewing
PRODUCTS

Distributed in Minnesota, North and South Dakota and western Wisconsin *by*

Blomfield-Swanson Brokerage
734 Midland Bank Bldg.
Minneapolis 1, Minn.

QUALITY GOES IN BEFORE THE NAME GOES ON

If You Own a Business

Watch Your Acid Test Ratio

Bankers and Credit Men Do

THERE are indications that money is beginning to tighten somewhat, which means that the feed dealer will find it more difficult to borrow if he needs business funds and he may have a harder time getting credit from suppliers. It means further that he must get a better grip on his own finances in order to do business on his own money. The first step toward this objective is to have some yardstick with which to measure financial liquidity with accuracy. The next step is to use that yardstick consistently.

Too many dealers think only of their net worth when they appraise their financial standing, they total their assets, what they own, deduct their liabilities, what they owe, and consider the difference their net capital resources. In one way, they are right, but there is a big difference between net capital ownership in a business and capital liquidity. A businessman can have a substantial net worth on paper and yet be unable to pay his bills. Meeting your obligations when due is the acid test of successful operation. The creditman or banker considers it of paramount importance and the dealer, for his own good, must follow suit. His solvency is not in his fixed capital, but in his working capital.

Business Liquidity

Too many dealers assume that business liquidity is fixed, that it can be determined by a calculation that never changes. This isn't so. When money is on the loose, and sales come easy, the formula for calculating business liquidity follows a more liberal pattern. Then the dealer can show $2,000 in current assets for every $1,000 in current debt and he is assumed to have a good liquid position, that he can pay his bills on demand, that the creditors can extend him credit without fear of non-payment. But, when money tightens, when sales begin to tee downward, then the formula is more restrictive. A dealer considered a candidate for solvency must show a ratio of $3,000 in current assets to $1,000 in current debt.

But that isn't all. When credit tightens, bad debts tend to increase, collections lag and credit customers as well as the dealer are affected. Many who were good pay before, become slow pay thereafter. This obviously keeps the dealer short of funds, even if his ratio of current assets to current debts is adequate. So, the banker or creditman breaks down the current assets to determine their real value, throwing out all those accounts that are long over-due on the theory that if the dealer couldn't collect from these debtors when money and sales were more abundant, he isn't likely to collect from them when money and sales are less abundant. This reduces the current assets and makes their ratio to current debts less satisfactory.

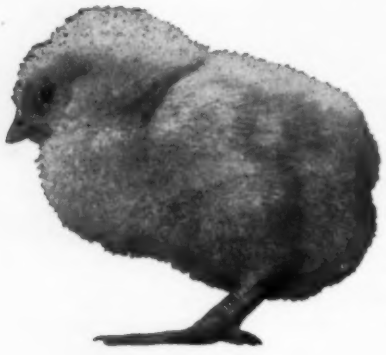
Bill Collection

Many dealers are lax in the collection of bills due them. They let their customers pay as they please, putting in a bid for their money only when they find themselves getting short of cash. The dealer should always maintain a good collection system and follow up his delinquent accounts promptly on the due dates. There is such a thing as educating your customers to pay promptly and this can be done with a systematic card file that is operated on the tickler plan by which the accounts due but not paid come up for attention each day. The dealer who has such a system and uses it consistently will find that, regardless of whether business declines at some future time, or it picks up momentum, he will get his money in on receivables with satisfying promptitude and keep his business liquidity in the safety zone.

The other two assets in the current asset classification are cash and inventory. The dealer may feel that the actual cash in his bank account is of grade-A liquidity, but strange as it seems, it isn't. A certain amount of money must be kept in the bank as a nest-egg to be used only in the event of an emergency, or as a "cushion" when receipts decline substantially and bills must be paid on time, which sometimes happens in the best of businesses. Then too, the banker likes to see a respectable balance maintained on every depositor's account consistent with its activity and the dollar volume on check clearances. It is a factor in appraising credit, and so, the dealer can't count on every cent he has in the bank to pay his bills unless he is going out of business. In general, it is considered good practice to keep an average balance on hand equal to one third of the current liabilities, bills and short-term loans payable. A short-term loan is one that must be paid one year from the date of issuance.

Now for the inventory. When goods

There are no headaches with DPi **Vitamin E**



WHEN you buy your vitamin E feed supplement from DPi, you know it will keep its potency. That's because we use the esterified form, *d*-alpha-tocopheryl acetate. Tests show 100% stability after as long as six months' storage at 70° F.

It's easy to use, too. We ship it conveniently packaged in drums, in any quantity you require, on whatever schedule you wish. And, you can have DPi vitamin E in either oil or dry form whichever suits your mill best.

The dry material is *Myvamix Vitamin E Feed Supplement*. It's on a base of soybean meal and has a potency of 20,000 International Units of Vitamin E per pound. The oil is *DPi Distilled Vitamin E Concentrate, Type 6*, with a potency of 300,000 International Units of Vitamin E per pound.

Let DPi make the fortification of your feed with vitamin E as easy as possible. For further information or prices, write, wire, or phone *Distillation Products Industries*, 627 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company). Sales offices: New York and Chicago • W. M. Gillies and Co., Los Angeles and San Francisco • Grandone Inc., Needham, Mass. • Charles Albert Smith Ltd., Montreal and Toronto.

"Myvamix" is a trade-mark

DPi

leaders in research and production of vitamin E and vitamin A

Also . . . high vacuum equipment . . . distilled monoglycerides . . . more than 3500 Eastman Organic Chemicals for science and industry

Ray Ewing PRODUCTS

Distributed in Nebraska, Kansas, No. Missouri, and Eastern Colorado *by*

WRIGHT W. COCHRAN
1211 Randolph Ave.
Phone 7466
TOPEKA, KANSAS

QUALITY GOES IN BEFORE THE NAME GOES ON

LOW COST **STORE POSTERS**

CUSTOM BUILT OR STOCK DESIGN

TO HELP YOUR DEALERS SELL MORE FEED!

Printed in full color to attract attention and suggest your brand. Can be used as window, counter or floor displays, or can be tacked up on wall to do a year round selling job. Write today for free samples and low prices.

SIMMONDS & SIMMONDS ADVERTISING
201 No. Wells St., Chicago 6, Ill.

DEALERS and JOBBERS

THERE'S A REASON WHY YOU SHOULD SELL DARi-DRi

HELPS SPEED-UP GROWTH

DARi-DRi

A DRY MILK PRODUCT FOR HOGS & POULTRY

INCREASE YOUR BUSINESS!

. . . sell DARi-DRi to your feed customers . . . fast turn-over, easy to handle, less inventory, comes in handy 50 lb. bags, won't spoil or freeze and it does the job of either wet or dry milk products.

ADVERTISING AND PROMOTION!

. . . backed by consumer advertising every month in leading farm papers. Supported by vigorous promotion literature, posters, decals, and signs. Look for the DARi-DRi bulls-eye!

EXTRA PROFITS FOR FARMERS!

Faster growth means less feed and more profits . . . DARi-DRi is all food, no water or fiber. Helps the farmer get the most out of his feed. The sooner they start using DARi-DRi the more satisfied they will be.

OUR GUARANTEE!

Have your customers try a bag today and see for themselves . . . if they are not satisfied, return what's left and get all your money back. That's right, we will back you up and no questions asked.

F-11

MAIL TODAY!

Midwest Dried Milk Co.
DUNDEE, ILLINOIS

Please send me more information!

NAME _____

ADDRESS _____

CITY _____

are plentiful, the total dollar volume on hand at cost prices should not be more than one third of the current assets. If the total is higher, then the creditman or banker will take a critical view of the situation because it will indicate that sales are below par. He is interested in how you will pay your bills, and of course, merchandise must be sold before one can think about such liquidation. Then too, when a dealer is overloaded on inventory, carries more than the normal average in stock on hand, a review of his accounts payable will disclose numerous bills past due, which is not a healthy condition under any circumstance.

When goods are not plentiful, the ratio of one third inventory to the total of current assets can be lifted for the duration and the dealer can have less in the bank and more on his shelves on the theory that he can convert his stocks into cash readily. There have been times when merchandise was in very short supply that its acquisition was more important than the size of the bank balance.

Eastern department stores report that for 25 straight weeks their sales have trailed the year-ago figures—and usually the two-year-ago figures. This may not be indicative of the sales experiences of stores elsewhere, but the trend materializing in a big trading center is worth more than a passing thought. If sales keep dipping, inventory will be taken off the roster entirely as a factor in appraising business liquidity. This means that the dealer must develop a selling program that keeps his turnover high, that he should have a good stock control system that enables him to record the turn on each item so that he can buy in quantities that keep his trade well supplied and yet not overload his shelves.

When goods do not move so fast and the dealer overloads on stock or carries an unbalanced stock, too much of one item, too little or none of another item, he freezes too much money in inventory investment and does not make maximum sales because some customers must be turned away because of "outs." This obviously affects his liquidity and it is the reason why creditmen disregard inventory when the market flows freely with all kinds of wares and customers are more selective in making purchases.

At such a time, what is the most dependable yardstick of business liquidity? The acid test ratio. That is

For Quality Products LOOK TO Amburgo

Amburgo SUPERTRATE

The dried fish solubls "Growth Concentrate" that consistently leads all others

Now, for 1952

DOUBLED RIBOFLAVIN

(formerly 22 Mlg, now 44 Mlg per lb!)

—To compensate for greater feed efficiency, particularly in today's Broiler rations.

THE Amburgo COMPANY
1315-17 WALNUT STREET
PHILADELPHIA 7 PENNSYLVANIA

"RED A CAN BUILD YOUR SALES, TOO"

"AUBREY'S RED A FEEDS SETTING NEW HIGHS IN SALES FOR MANY SOUTHERN FEED DEALERS . . ."

HERE'S WHY!

Serving the Ohio Valley and the South Since 1898

1. **PRICED RIGHT.** RED A prices get down to brass tacks. No fancy frills. Quality that ranks with the best and priced so feeders can profit. RED A feeds are priced to sell and do.

2. **MADE RIGHT.** Modern up-to-date formulas of proven merit. Ingredients carefully selected and tested. RED A feeds get results!

3. **DELIVERED RIGHT.** Excellent mill location to serve the Ohio Valley and the South without expensive out-of-line hauls. Mixed car service available with millfeeds, proteins, etc. Save money on inventories with RED A extra service.

AUBREY FEED MILLS
LOUISVILLE 4, KY.
Serving the Great Southeast

● WE ALSO OFFER COMPLETE MIXED CAR SERVICE • GRAIN ●

what it is called by bankers and creditmen. That is the test the dealer should use to determine his business liquidity whether he wants credit or has all he needs. One never knows in these hectic times when the picture will change and such accommodation will be needed, and so, it pays to keep abreast of all the business facts you need or may need at some future time to operate successfully.

The acid test ratio is the ratio of quick assets to current liabilities. The quick assets are cash and accounts receivable. The acceptable standard is one to one—one dollar of quick assets for every dollar of current liabilities, to wit:

QUICK ASSETS	
Cash on hand and in bank	$1,600
Accounts and notes receivable	3,150
Total	$4,750

CURRENT LIABILITIES	
Accounts payable	$3,750
Short-term loans payable	1,000
Total	$4,750

The ratio here is one to one, the minimum parity that will give a business safe liquidity if sales begin to taper off and money gets tighter. Also notice that the cash on hand and in bank is $1,600, about one third the current liabilities, $4,750. If the accounts receivable are all collectible and the dealer is collecting promptly, these figures give assurance of sound liquidity.

We are not disposed to cry "wolf" about the business conditions to come, but we believe it pays to be prepared, just in case. Too many dealers were caught napping in days gone by when business activity declined and they could have weathered the storm much better had they been prepared for the slump.

If business keeps plowing ahead in 1953 and 1954, if there is no decline, the dealer won't lose anything by bolstering his "know-how" with every dependable managerial gimmick on the agenda. The acid test ratio is one of those gimmicks that the dealer will find useful in the management of his business whether the times are good or bad.

INVESTIGATE
DEMON
• Steamed ROLLED OATS
• Steamed CRIMPED OATS
• PULVERIZED OATS
Write for information
DES MOINES OAT PRODUCTS CO.
Phone 6-3155
Des Moines, Iowa

SAVE MONEY
with
SEA-COLL

Norman E. Dewes

IN NEW POST—Charles B. Anderson, vice president and director of General Mills, Inc., formula feed operations, has announced the appointment of Norman E. Dewes as sales manager of the company's north central formula feed division. Mr. Dewes joined General Mills in 1935 as sales executive, Larrowe Division, Detroit, and a year later was named assistant sales manager of that division. On Jan. 1, 1949, he transferred to Minneapolis as assistant director of formula feed sales. He has specialized in dairy feeding and management. He has been instrumental in developing the Larro herd check, flock check and other feeding programs. He has also conducted sales schools and the National Larro Farm School at the Larro Research Farm in Detroit. Before joining General Mills, Mr. Dewes spent 14 years with the U.S. Radiator Corp.

AD AGENCY APPOINTED

EVANSTON, ILL.—Burrows Equipment Co., Evanston, Ill., has appointed Simmonds & Simmonds, Inc., Chicago, as the company's advertising agency, according to an announcement by Parke Burrows, president.

3 REASONS WHY
Tra-min®
is the best
trace mineral concentrate
for you...

1 ... Because it's a *combination* of "protein-bound" iodine, manganese, cobalt, copper, iron and zinc, scientifically *balanced* for maximum nutritional value.

2 ... Because Tra-min is the *only* trace mineral concentrate that supplies absolutely stable iodine, "protein-bound" to prevent loss – to promote assimilation.

3 ... Because it's a single product that supplies *all* the vital trace minerals for your feed or mineral mixtures. Tra-min eliminates pre-mixing, disperses uniformly, provides an easy way to make your feeds nutritionally more complete—*at very low cost.*

Let us show you what our modern, efficient, patented process for manufacturing Tra-min can mean to you in reduced fortification ingredient costs. Find out how Tra-min can provide nutritionally *complete* trace mineral protection—give you a better feed—save you many dollars. Write today for further information. Address Dept. FS-11.

Tra-min®
NUTRITIONALLY SOUND • TIME-TESTED • ECONOMICALLY PROVEN

MANUFACTURING CHEMISTS
Whitmoyer LABORATORIES, INC.
MYERSTOWN, PENNA.
PRODUCTS OF SCIENTIFIC MERIT
DISTRIBUTORS
NEW ENGLAND: Grandone, Inc., Needham, Mass.
HAVANA, CUBA: Ave. S. A. Infanta, 1201
TEXAS: Hannss Supply Co., Lubbock, Texas
CANADA: Whitmoyer Laboratories, Ltd., Yarmouth, Nova Scotia
WAREHOUSE STOCKS ALSO LOCATED AT CONVENIENT POINTS

WORTH CROWING ABOUT!
HILLTOP AIDS FOR POULTRY
Hilltop Laboratories 718 Washington Ave. N. Minneapolis 1, Minn.

Collofos
SOFT PHOSPHATE WITH COLLOIDAL CLAY
Distributed by
M. A. McCLELLAND CO.
Dwight Bldg. - Kansas City 6, Mo.

DANNEN
Call DANNEN for
FEED INGREDIENTS AND GRAIN
• Soybean Meal
• Cottonseed Meal
• Linseed Meal
• Alfalfa Meal
• Brewers Grain
• Oat Meal Feed
• Mill Feeds
• Tankage
• Meat Scraps
• Molasses
• Crimped Oats
• Crimped Barley
• Corn Chop
• Ground Grains
DANNEN MILLS, Inc.
GRAIN AND JOBBING DIVISION
ST. JOSEPH, MO.

McMILLEN FEED MILLS CONCLUDES CONVENTION

FRENCH LICK, IND.—The 18th annual convention of McMillen Feed Mills recently concluded here centered on 1953 sales and service techniques, with proceedings patterned after a political rally. Keynoters, proposals and nominations were heard in developing plans in the "Master Mix Party."

Among the speakers were Dr. Kenneth McFarland, guest lecturer for Reader's Digest, and educational consultant of General Motors Corp., and D. W. McMillen, Sr., chairman of the board, McMillen Feed Mills.

Awards, based on achievements over the past year, were made to men in the sales and retail stores divisions. Bronze wildcats and engraved plaques were presented those admitted to the Wildcat and Pacesetter Clubs, respectively. These two clubs are McMillen Feed Mills' most exclusive honorary sales groups.

Wildcats were awarded to seven men in the sales division: Dr. R. H. Slyder and S. L. Miller of Pennsylvania; L. E. Alexander and R. O. Roberts of Ohio; J. B. Miller of Tennessee; J. M. Cochran of Michigan and M. W. Beekman of Alabama. Pacesetter plaques went to: J. B. Pritts of Pennsylvania and T. W. Jackson of Michigan, both in the stores division.

IOWA SALESMAN NAMED

WATERLOO, IOWA—George T. Condon will represent Sani-Flor poultry litter in Iowa for Western Mineral Products Co., Minneapolis, vermiculite processors. His headquarters will be in Waterloo. Condon has a farm background and was manager of the farm and garden store of Sears, Roebuck & Co. at Ogden, Utah, for the past four years.

$1,500 GRANT SET UP

COLUMBIA, MO.—The Missouri Poultry Council has established a $1,500 fellowship for research in poultry husbandry at the University of Missouri, reports Vincent E. Bates, council president. According to a recent announcement of the university to Mr. Bates, Thomas W. Day, Route 1, Rocheport, Mo., a graduate student, has been awarded the fellowship. The poultry department of the university also announces that a $150 scholarship provided by the council has been awarded to Dale Ross, Mountain View, Mo.

CATTLE GRADES DEFINED

Price spread in cattle is wide within a grade, but one grade begins where another leaves off, according to the Department of Animal Husbandry, Michigan State College.

FEED PRICES

CHICK STARTER	6.00
GROWING MASH	5.90
EGG MASH	5.90
32% POULTRY SUPP.	6.80
32% BREEDERS SUPP.	7.70
40% PORK MAKER	6.50
BRAN 5.00 MIDDS	5.00
OYSTER SHELLS 80#	1.00
SALT BLKS. WHITE	.50
SALT " SUL.	.60
SALT " IOD.	.70
GRIT FINE OR COURSE	1.30
CORN KING MINERAL	
17% LEAF MEAL	6.00
COTTON SEED MEAL	6.10
SOYBEAN MEAL	6.20
LINSEED OIL MEAL	6.10
COD OIL QT. .75 GAL.	3.00
MEAT SCRAPS	7.00
TANKAGE	

PRICE BOARDS!
"Completely Changeable"
18"x36" - - 21 SLOTTED OPENINGS
The Beautiful Neo-white Cut-out Gummed Paper Letters Mount on Velvet Black Panels As Easy as Mounting a Stamp
NUMBERS SNAP IN AND OUT FOR QUICK PRICE CHANGES
"Will Last a Lifetime"
SPECIFY CAPTION
Each board contains 1,000 Gummed Letters, 300 Snap-in Numbers, 24 1½"x18" Panels; replacements as needed.
Plywood Back
One Board . . $15.95 ea.
Two Boards . . 14.50 ea.
Three or More 13.50 ea.
Fruchey Service Co.
BOX 461 — NAPOLEON, OHIO

If You Want More Capacity Per Horsepower, Buy the FORSTER HAMMER MILL
FORSTER MANUFACTURING CO.
Machines for Modern Milling
1411 S. McLean, Wichita, Kansas

Ray Ewing PRODUCTS
Distributed in Iowa by
V. A. MAGNUSON SALES CO.
230 Park Place
Des Moines 12, Iowa
Phone: Des Moines 2-9597
QUALITY GOES IN BEFORE THE NAME GOES ON

Year Round Supply—
Stable Low Cost
HOMOGENIZED CONDENSED FISH
FIVE PLANTS IN FULL PRODUCTION
HOMOGENIZED Condensed FISH
DEHYDRATING PROCESS CO.

IT'S AS SIMPLE AS THIS . . .

when you add Lime Crest MICO® Trace Mineral Pre-Mixes to formula feeds

You can be *sure* that your formula feeds *really* contain adequate amounts of the vital trace minerals Manganese, Iron, Iodine, Copper, and Cobalt. You can be sure, because the Lime Crest Control Laboratory rigidly governs MICO quality and the exclusive Lime Crest Blending Process assures uniform distribution. So buyers of your feeds can be sure that the health and productivity of their poultry and animals cannot be impaired by borderline deficiencies of these vitally important trace mineral elements.

AND YOU PROFIT, BECAUSE . . .

First, Lime Crest MICO Pre-Mixes are economical to use. And because they produce superior feeds, they help increase your volume. It's as simple as that. Available in standard and custom-blended formulas.

FREE SAMPLE! MAIL COUPON NOW!

What Are MICO Trace Mineral Pre-Mixes?
A laboratory controlled, exclusive - process blend of the following essential trace minerals in Lime Crest Calcite Flour.
Manganese—.2 to 10% for calcium metabolism, growth
Iodine—.01 to .5% for normal thyroid function
Iron—.1 to 5% for producing rich, red blood
Copper—.01 to .5% For utilization of iron
Cobalt—.005 to .1% for maturing of red blood cells

LIME CREST PRODUCTS
Limestone Products Corporation of America
NEWTON, NEW JERSEY

Limestone Products Corp. of America
Newton, New Jersey
Dept. K0110
☐ Please send me FREE sample and literature describing MICO Trace Mineral Pre-Mixes
☐ Please send FREE technical data and ____ pounds MICO Pre-Mix for test run in plant
NAME
STREET or RFD #
STATE
TOWN

Want to advertise to the **$3,500,000,000 Feed Industry?**

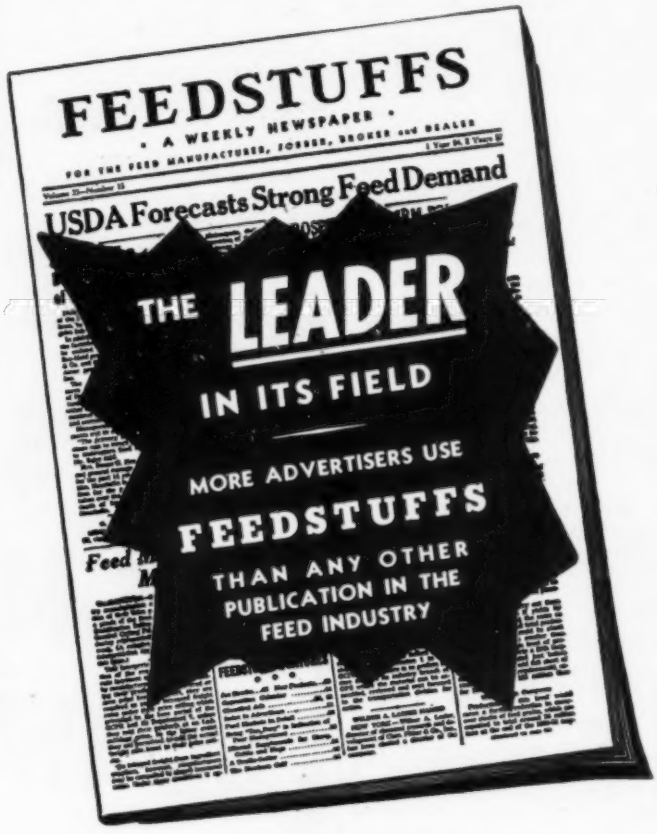
YOU NEED

FEEDSTUFFS

THE

*LEADER**

IN ITS FIELD . . .



* *FEEDSTUFFS leads the field in advertising with a total of more than 375 current advertisers.*

FEEDSTUFFS leads the field in covering the feed industry. HERE'S WHY:

BLANKET COVERAGE . . .

FEEDSTUFFS leads the field in giving COMPLETE coverage of the formula feed manufacturing and distributing industry, with the largest paid circulation and the largest total circulation. Consistent advertisers reach more than 40,000 important individuals and firms in all segments of the feed industry through the columns of FEEDSTUFFS. These include more than 8,000 feed mills and manufacturers, more than 5,000 wholesale dealers, more than 22,000 retail dealers and more than 5,500 chick hatcheries that deal in feeds. Advertisers using FEEDSTUFFS weekly have their message delivered with more than 700,000 copies of the magazine annually, more than twice as many as any other publication in the industry. FEEDSTUFFS offers blanket nation-wide coverage matching the needs of advertisers with national distribution.

SELECTIVE COVERAGE . . .

FEEDSTUFFS offers "direct-hit" coverage of the industry by sectional geographic areas. The controlled portion of the circulation of the magazine goes to a carefully selected list of companies in the feed industry on a weekly rotating schedule directed to one geographic section of the United States each week. This effective combination of paid and controlled circulation was established for advertisers who are limited by freight rates and other factors in their sales distribution. It offers such an advertiser virtually complete coverage of the industry within his sales territory, without paying the high costs of a large national circulation. As of January 1, 1952, about 9,500 receive FEEDSTUFFS weekly and the remainder is reached periodically through a system of weekly controlled mailings of 4,000.

If you have something to TELL—and SELL—to the 3½ billion dollar feed industry you need the LEADER in the field. Give us a call.

THE MILLER PUBLISHING CO.
The Businesspaper Family Serving the Related Fields of
Flour, Feed, Grain and Baking
THE NORTHWESTERN MILLER • FEEDSTUFFS
THE AMERICAN BAKER • MILLING PRODUCTION

FEEDSTUFFS

118 South Sixth St., Minneapolis 2, Minn.
BRANCH OFFICES: New York, Chicago, Kansas City, Toronto

NEW ELEVATOR—Shown above is a new "wing" to the elevator system of the A. E. Staley Mfg. Co., Decatur, Ill. Company officials said that these new facilities, completed in time for this fall's soybean harvest, give the firm the world's largest completely mechanized elevator for handling corn and soybeans, with a total capacity of 11 million bushels of grain. The "bins" shown here have a storage capacity of 5 million bushels. Boxcars are automatically tilted and emptied of grain, which falls into pits from where the conveyor system takes it to the belt system on top of the structure. By means of these belts, a dispatcher, working at a control board, routes the grain to the proper bins. Similar belts at the bottom of the bins remove the grain for processing.

HALLET & CAREY TAKES OVER VICTORIA PLANT

VANCOUVER—All obstacles in the way of Hallet & Carey (B.C.), Ltd., in taking over the million-bushel grain elevator at Victoria, now appear to have been removed. Latest advices from that city indicate that Kerr, Gifford & Co., Portland, Ore., has withdrawn its application to the Supreme Court to quash the sale of the elevator.

The action by Kerr, Gifford & Co. was taken when the Victoria city council had taken steps to have the sale approved by the provincial minister of municipal affairs. The Portland firm, which had the elevator under lease for several years to store American corn, bid $1,000 less for the house than the new owners and the court action was taken on the grounds that the property assessment was set too low.

The new owners plan to get the elevator into operating condition the end of the year and participate in the heavy export grain movement from this coast.

FARM COSTS UP, NET DOWN

URBANA, ILL.—Farm production costs in the U.S. have gone up $5.2 billion in the past five years, while net farm income has dropped $1.8 billion, the University of Illinois College of Agriculture reports.

With PREMIER — it's easy to PEP-UP your sales

BIG BALES Sizes for every need

SMALL UNITS for re-packing (1 pack to 3 ba.)

PREMIER LITTER

It's easy to sell Premier Quality, Packaging, Service. Send for prices and details

PREMIER PEAT MOSS CORP., 535 FIFTH AVENUE, NEW YORK 17, N. Y.

SPECIFY Columbia Calcium

COLUMBIA QUARRY CO.

1007 Washington Ave. ST. LOUIS 1, MO.

for personal service:

WALSH GRAIN CO.

1002 Flour Exchange Lincoln 0673

MINNEAPOLIS 15, MINN.

MATT WALSH ◆ SHELLEY WALSH

SO MUCH DEPENDS UPON SO LITTLE

Fortified

VITAMIN D

Fleischmann's

IRRADIATED DRY YEAST

DISTRIBUTED BY THE FOX COMPANY

FOXCO QUALADEE

A and D VITAMIN OIL

NEWFIELD NEW JERSEY

"PRODUCTS OF PROGRESS"

You'll be glad you bought a

KELLY DUPLEX vertical feed mixer.

Unsurpassed for quick, positive action the KELLY-DUPLEX Mixers constantly keep feed sprayed and mixed together. The resulting mixture is guaranteed to stand up under minute inspection, the variation in protein value being only several hundredths of one percent, by actual laboratory tests.

The KELLY-DUPLEX Mixers are furnished with the proper drive to best fit your mill. Efficient, positive V-belt or electric motor drives available.

For greater milling profits, insist on the economical operation and high productive output of KELLY-DUPLEX Mixers.

Immediate delivery.

The KELLY-DUPLEX double-geared chain drag with motor drive, variable speed control.

Vertical Feed Mixer with Socking Scale for weighing after mixing. Built integrally with frame.

Corn Sheller with blower for husks, cobs and chaff. 100 bushels per hour capacity.

The Duplex Mill and Mfg. Co., Springfield, Ohio

Gentlemen: I want to know more about KELLY-DUPLEX feed mill and elevator equipment, and how to increase my profits by planning for lower handling and operation costs. I am interested in items checked at right.

☐ Vertical Feed Mixer ☐ Fitless Corn Sheller
☐ Hammermill ☐ Keystone Corn Sheller
☐ Corn Crusher ☐ Burr Mill
☐ Corn Scalper ☐ Magnetic Separator
☐ Chain Drag ☐ Mill Blower
☐ Corn Cutter & Breaker ☐ Electric Motor
☐ Electric Truck Hoist ☐ Full Line Booklet

NAME

ADDRESS

What's New in Feeding

Putting Feed Research to Work

Re-evaluation of Protein Requirements of Growing-Fattening Swine as Influenced by Feeding an Antibiotic

● D. V. Catron, A. H. Jensen, P. G. Homeyer, H. M. Maddock and G. C. Ashton; Journal of Animal Science, Vol. 1, page 221 (May, 1952)

These investigators at the Iowa Agricultural Experiment Station thought it advisable to re-evaluate the protein requirements of swine at different weights because (1) present recommendations are based on research conducted almost a decade ago and therefore do not take into account the recent advances in feeding and (2) many hog producers have observed that satisfactory growth in swine can be obtained on rations containing less protein than is recommended.

It is suggested that perhaps non-protein dietary factors such as water-soluble vitamins present in high protein ingredients have in the past led us to believe the protein requirement of swine is higher than it actually is. Increasing the level of protein would also increase the amount of such limiting factors in the diet and cause a growth response.

One hundred twenty-eight Duroc pigs were fed a corn-soybean oil meal ration supplemented with adequate amounts of minerals and vitamins, including vitamin B_{12}. The protein of the rations was adjusted by altering the levels of corn and soybean oil meal. The test was designed so that two lots each received 20, 18, 16 and 14% protein from weaning (29.9 to 37.5 lb.) to 75 lb. From 75 to 150 lb. these respective lots were fed 17, 15, 13 and 11% protein, and from 150 to 200 lb. 14, 12, 10 and 8% protein rations were fed. One of the two lots on each level of protein received 10 mg. aureomycin per pound (20 gm. per ton) and the other received no antibiotic. The pigs were kept in drylot and had had no antibiotic previous to the experiment.

From weaning to 75 lb., 14% protein appeared to be sufficient whether an antibiotic was fed or not. Eleven per cent protein was found to be adequate for these hogs from 75 to 150 lb. This was true both in the presence and absence of antibiotic. Feed efficiency was not affected when the protein content changed in this period if antibiotic was included; however, when antibiotic was omitted, feed efficiency decreased with an increase in protein. This may have been caused by excessively loose feces in the pigs fed higher levels of protein without aureomycin.

In the period from 150 to 200 lb. it was apparent that the antibiotic exerted a protein "sparing-like" effect. The pigs fed 8% protein and aureomycin gained 1.88 lb. daily as compared to 1.54 lb. for those fed 8% protein without aureomycin. If pigs not receiving aureomycin were fed more than 8% protein, daily gains were equivalent to those made by pigs fed the antibiotic. During this period there was no difference in the amount of feed required to produce a pound of gain between the several lots.

Considering the over-all results from weaning to 200 lb., it is apparent that the group of pigs fed 16% protein from weaning to 75 lb., 13% protein from 75 to 150 lb. and 10% protein from 150 to 200 lb. made the best daily gains if no antibiotic was given. When antibiotic was added to the corn-soybean oil meal ration there was no significant difference in daily gains in the lots of pigs fed the different levels of protein. In other words, pigs fed the 14%, 11%, 8% protein ration gained as rapidly as those fed higher levels of protein during the three different growth periods when an antibiotic was fed.

Since pigs grew as well on the low protein rations with antibiotic as they did on a higher protein ration without antibiotic, it is assumed that a definite protein sparing action occurred which was directly due to the antibiotic.

Observations made on back fat depth, length and depth of body and per cent of lean meat showed no significant differences either in the presence or absence or antibiotic or with different levels of protein.

COMMENTS

These Iowa investigators have implied that the protein content of complete feeds for pigs fed in drylot should be 14, 11 and 8% from weaning to 75 lb., 7-150 lb., and 150-200 lb., respectively, when the conditions of this experiment are duplicated. From a nutritional point of view, these conditions were: (1) Soybean oil meal was for all practical purposes, the only source of protein supplementing the protein of the corn fed these pigs. (2) The soybean oil meal was a blend of equal parts of three different manufacturers' solvent extracted meals. No mention was made as to whether these meals were obtained directly from the processors or were purchased on the open market. (3) The complete rations fed these pigs contained at all times

Customers keep COMING BACK because Schenley Feed Supplements keep their animals GOING FORWARD

PALATABLE SCHENLEY FEED SUPPLEMENTS STIMULATE RAPID, HEALTHY GROWTH

ANTIBIOTIC FEED SUPPLEMENT SCHENLEY AFS-4

ANTIBIOTIC FEED SUPPLEMENT SCHENLEY, one of Schenley's newest products, is a powerful antibiotic, retaining its potency for long periods in pellet or powder form. It contains 4 grams of PROCAINE PENICILLIN per pound, dispersed in CARIMIN. Each gram of PROCAINE PENICILLIN is equivalent to .6 grams of crystalline PENICILLIN G master standard. Growth response in chicks and hogs has been known to reach an average of 20% even when as little as 2 grams per ton was used. Make your feeds up-to-the-minute and capable of producing exceptional results with ANTIBIOTIC FEED SUPPLEMENT SCHENLEY.

SCHENLEY'S CC-25

Schenley's CC-25 is extremely important in any diet for poultry. A supplement rich in protein (17%), Schenley's CC-25 contains choline chloride carried in Distillers Dried Grains in a 25% proportion. Choline is necessary for healthy development, maximum growth, and the prevention of slipped tendon in poultry. It is one of the vitamins of the B-complex, and aids poultry in the assimilation of vitamin A and in the metabolism of fat. Use Schenley's CC-25 in your feeds for larger and healthier poultry.

SCHENLEY B-12 ANTIBIOTIC FEED SUPPLEMENT BPS-32

This supplement contains 3 milligrams of B-12 and 2 grams of PROCAINE PENICILLIN per pound, dispersed in the feed nutrient, Schenley's CARIMIN. Each gram of PROCAINE PENICILLIN is equivalent to .6 grams of crystalline PENICILLIN G master standard. PROCAINE PENICILLIN has been shown to be unusually effective for both poultry and hogs.

SCHENLEY DISTILLERS, INC.

Grain Department, 26 East Sixth Street, Cincinnati 2, Ohio

SELL Capette PELLETS

America's largest selling pellet for producing CAPONETTES!

Anderson Box Co. • Indianapolis, Ind
Mid. Wick & Fry • Cumberland, Ind.

Every Good Feed

Get your supplies from

HENRY K. FAUST

Successor to King Brothers & Co.
The Bourse, Philadelphia 6, Pa.

IDENTIFY YOUR FEED after it leaves the Bag

ASSURE YOUR 1953 SUPPLY of CHICK FEEDERS

Place your order now for immediate or future delivery

WRITE TODAY FOR PRICES

GENERAL DISTRIBUTING CO., INC
Box E NEWTON, KANSAS

the same level of minerals including the trace elements iron, copper, cobalt, manganese and zinc, and the same level of B-complex vitamins, some (especially folic acid, pyridoxine, thiamine and even choline)' of which are not customarily added to present day pig feeds. (4) These particular rations, which performed satisfactorily in this study at 14, 11 and 8% protein, respectively, contained per ton of complete feed 20 grams of aureomycin, a level which is twice that recommended by the firm producing this antibiotic feed supplement.

The above attempt to qualify the nutritional conditions of this study is not intended at all to belittle or detract from this very fine scientific investigation. This is an exploratory study and must be treated as such. Rather, they are cited merely as a warning to farmers and to feed manufacturers. It is unbelievable that a hog feeder who uses a home-made mixture, or hand feeds separately ground yellow corn, a little soybean oil meal, a simple mineral mixture, and even an antibiotic, is going to obtain optimum results with his drylot-fed pigs of any weights—even from 150-200 lb. Disappointing results are also in the making for the farmer who dilutes excessively with grain a good, but not a specially fortified, commercial complete hog feed of say, 14, 16 or 18% protein.

Then, how about your pig starters, hog balancers and hog supplements or concentrate mixes? It would be terrific—the antibiotic, vitamin and trace mineral fortification that would be needed, especially for balancers, supplements, or concentrates to permit dilution with grain on the farm to a protein level of 11 and 8%. Ever try making an 8% protein feed with corn? It takes about 92% corn and 8% minerals to do this. Even 92% corn, 3% of 44% soybean oil meal, and 5% of a combination of minerals, vitamins, and antibiotics runs over 9% protein. That's a ratio of some 33:1 corn to soybean oil meal. Never heard tell of a soybean oil meal, or of any assortment of proteins that good. Maybe the pig doesn't require the amino acids which have been reported so many times in the literature, or perhaps we are to conclude that in the presence of antibiotics (aureomycin in this instance) the pig is capable of synthesizing in its intestinal tract a portion of the essential amino acids which are deficient in the proteins of corn.

It is assumed that these investigators never intended that feed manufacturers should try to comply with the protein levels and other nutritive factors of these complete rations in making mixed hog feeds; not, at least, until much more work is done of a practical nature to solve many questions and to explore many situations not attempted in this study. However, this report should serve as a reminder of the importance of adequately covering each hog feed with recommendations on tag or in literature regarding dilution, if any, with corn and/or minerals that your feed will permit without reducing its nutritional completeness for hogs of different weights and/or ages.

In these Iowa studies there was no significant difference in back fat depth or per cent of lean meat between the pigs fed rations of differing protein contents with or without antibiotics. However, it is important to note that all of the pigs had more back fat and less lean meat than is considered optimum. The most desirable carcass of the size obtained in this study should have no more than 1.25 in. of back fat and the carcass should analyze at least 33% lean meat. The pigs in this study averaged 1.84 in. of back fat, and only 27% lean meat.

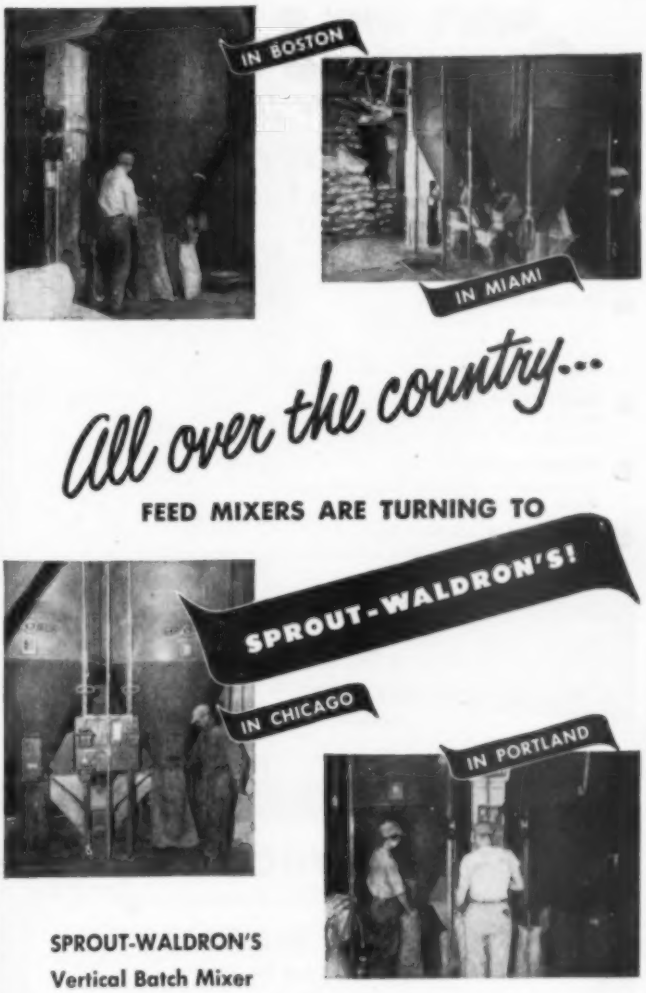
There is another point that deserves re-emphasis in this Iowa report. It is apparent that the pig's actual protein requirement is no lower today than it was years ago. Antibiotics may decrease the amount of high protein ingredients needed, simply because in their presence, the essential dietary factors, other than protein, are adequately supplied. In the past, these high protein ingredients were relied upon to supply all or a good share of the essential nutrients required to adequately supplement grains and grain by-products.

WEST SALEM, ILL., FIRE

WEST SALEM, ILL.—The major portion of the Campbell Grain & Seed Co. grain elevator here burned, with the loss being estimated at $200,000 by Morris Campbell, president of the company. Fire departments from three communities fought the blaze which started from undetermined causes. Mr. Campbell, who is mayor of West Salem, said he had adequate insurance.

DIVIDEND DECLARED

CINCINNATI—The Early & Daniel Co. declared a dividend of $4 a share on common stock, payable Nov. 19. This brings payments this year to $8 a share, similar to last year's dividends.



SPROUT-WALDRON'S Vertical Batch Mixer has become one of the most popular feed production units in the business!

It's efficient and space saving . . . It loads quickly and mixes thoroughly . . . And, it's low in operating cost! The S-W man will be glad to discuss your mixing problems with you at any time without obligation. Why not contact him today, *or write for Bulletin 47A. Sprout-Waldron & Company, Inc., 61 Logan Street, Muncy, Pennsylvania.*

SW SINCE 1866

SPROUT-WALDRON

VERTICAL MIXERS

TRADE MARK REG.

VITA-GEE

LIVE YEAST CULTURE—Why be alarmed with a Brewers' Yeast Shortage? GET the FACTS on VITA-GEE!

ZELLERS' LABORATORIES READING, PA.

WRITE...

FOR PRICES ON

PURE BUCKWHEAT FLOUR

SELF-RISING BUCKWHEAT FLOUR

Packed in 100, 25, 10, 5 and 2-lb. sacks

MANUFACTURED ON ONE OF THE MOST UP-TO-DATE BUCKWHEAT FLOUR MILLS IN PENNSYLVANIA

MITCHELL MILLING CO... CLEARFIELD, PA.

SOY BEANS BEAN OIL BEAN MEAL

— FUTURES —

Call ARTHUR C. HARRISON at STATE 2-1700, CHICAGO, ILL.

Our direct wire to the floor of the Merchants Exchange of Memphis enables us to offer immediate quotations and prompt executions of orders in soybean meal at both Chicago and Memphis.

Mitchell, Hutchins & Co.

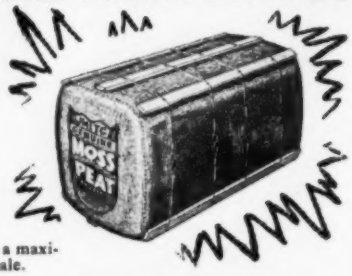
MEMBERS

Chicago Board of Trade
Merchants Exchange of Memphis
New York Stock Exchange
and Other Principal Commodity and Security Exchanges

One Wall St. New York 5 Digby 4-0700

321 S. La Salle St. Chicago 4, Ill.

HERE'S WHY J-MTC
GENUINE MOSS PEAT
MAKES PROFIT FOR YOU



- ASSURED YEAR 'ROUND SUPPLY
  Uninterrupted shipments from 29 of the largest moss peat plants in Germany assures you of adequate supplies at all times.
- NO SEASONAL SALES LOSS
  Your requirements booked now, will enable us to arrange shipments to arrive at port when you want it. No spring sales loss!
- SOLIDLY PACKED BALES
  You get a well packed bale with a maximum amount of moss peat per bale.
- SELECTED RAW MATERIAL
  Only superior quality moss peat of poultry or garden grade is used.
- AVAILABLE IN MANY SIZED BALES
  You can order Jumbo, Standard, Utility, Halves and Quarter bales.
- MODERN PROCESSING PLANTS
  Our 29 plants have latest equipment to assure proper preparation of all grades—in granulations to fit your needs.
- COMPETITIVELY PRICED
  You get all of the above advantages at competitive prices, because J-MTC moss peat is priced to build volume sales.

—FOR HORTICULTURE OR POULTRY—
write—wire—phone
J-M TRADING CORPORATION
Let Us Talk to You and Prove Our Ability to Serve You!
111 W. Jackson Blvd.—Phone WAbash 2-2065—Dept. F, Chicago 4, Ill.

"UCEPHOS"
(Dicalcium Phosphate)
BONE MEAL
Degelatinized and Sterilized
FISH MEAL
BONE CHAR
RN
RICHES-NELSON, INC.
Chemical and Allied Products
MURRAY HILL 7-7747
BUTLER, N. J.
342 MADISON AVENUE NEW YORK 17, N. Y.

USDA Lists CCC Grains Available for November Sale

WASHINGTON—The U.S. Department of Agriculture has announced the quantities and prices of Commodity Credit Corp. grains which are available for domestic and export sale during November.

Available for either domestic or export sale are 25 million bushels of wheat, 4.4 million bushels of oats, 2.5 million bushels of barley, 50 million bushels of corn, 235,000 cwt. grain sorghums and 144,000 bu. flaxseed.

The November domestic list, like previous lists, is based on prescribed minimum price levels. CCC may not sell any basic commodity or storable non-basic commodity at less than 5% above current support price plus reasonable carrying charges. The listed grains may be sold at market prices but not less than certain minimums.

Examples of minimum prices include: Wheat—Kansas City, No. 1 HW, ex rail or barge, $2.71 bu.; Minneapolis, No. 1 HDNS, ex rail or barge, $2.74; Chicago, No. 1 RW, ex rail or barge, $2.75. Oats—Chicago, No. 3 or better, ex rail or barge, $1.02. Barley—Minneapolis, No. 1 barley, ex rail or barge, $1.57. Corn—Chicago, No. 3 yellow, $1.91; Minneapolis, No. 3 yellow, $1.82. Grain sorghums—Kansas City, No. 2 grain sorghums, ex rail or barge, $3.13 cwt. Flaxseed—Minneapolis, $4.36 bu., No. 1 grade.

Sales from the domestic list from Jan. 1 through Oct. 24 included 7,770,960 bu. wheat, 1,338,640 bu. oats, 3,441,040 bu. barley, 32,351,378 bu. corn, 462,393 bu. flaxseed, 131,725 cwt. grain sorghums.

Available for export sale at market prices on date of sale at point of delivery are the same quantities of wheat, oats, barley and corn as reported above. Also eligible for export, at the same prices offered for sales to domestic buyers, are grain sorghums and flaxseed.

Sales from the export list from Jan. 1 through Oct. 24 included 8,853,106 bu. wheat, 810,830 bu. barley and 491,309 bu. corn.

GRAIN GROUP ORGANIZES

VANCOUVER — The Vancouver Grain Freight Brokers Assn. came into being here during the week. The group, which is affiliated with the Vancouver Merchants Exchange and various grain and shipping interests of the port, has as its objective the fostering of uniformity of practices, ethics, customs and usages and to encourage the rendering of efficient services between shippers, exporters and steamship operators. The first president is M. A. Ryan of Ryan & Storrs. C. J. Gillespie, dean of brokers here and operating under his own name, is vice president and treasurer while Herbert W. Cameron is secretary.

NET SURPLUS RISES

WINNIPEG—Almost 210 local cooperative associations operating through Manitoba Pool Elevators in the province of Manitoba, recorded a net surplus of $2,613,182 for the year ending July 31, 1952, compared with $2,565,141 the year previous. This was supplemented by a net surplus of $122,616 shown by the seeds department, compared with $54,163 in 1951.

For steady year-'round deliveries . . .
KELL-PHOS SOFT PHOSPHATE
WITH COLLOIDAL CLAY
Storage capacity now tripled. Highest quality natural phosphate material.
THE KELLOGG COMPANY
618 D. M. Bldg., Des Moines 9, Iowa
or P. O. Box 865, Ocala, Florida

THE NAME
VICTOR
ON FEEDS
CEREALS FLOUR
MEANS QUALITY

GRAY-O'KEEFE CO.
CEROPHYLLIN-D
(CHLOROPHYLL DERIVATIVE)
Chamber of Commerce Building
BUFFALO 2, NEW YORK
Call Cleveland 5177 or Teletype Bu. 444

Ray Ewing
PRODUCTS
Distributed in Utah and Southern Idaho by
BADER, INC.
214 24th Street
Telephone: Ogden 9323
P. O. Box 267 OGDEN, UTAH
QUALITY GOES IN BEFORE THE NAME GOES ON

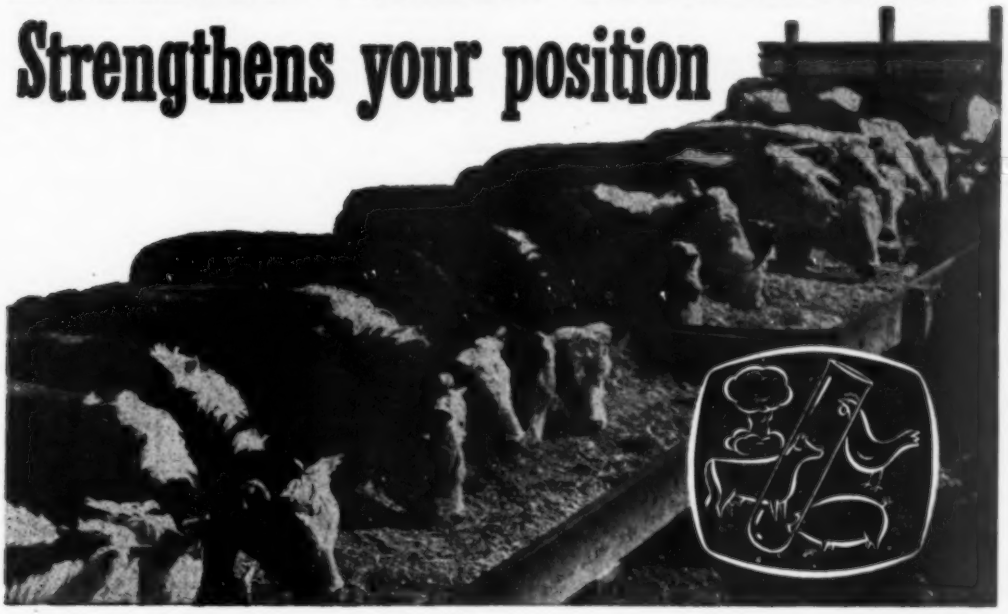
Peter Hand Foundation*
Exclusive Manufacturers
Vitamin–Antibiotic Premixes for the Feed Industry
BIOLOGICAL LABORATORIES • RESEARCH FARMS • BLENDING-MIXING PLANTS
GENERAL OFFICES
1000 W. NORTH AVENUE, CHICAGO 22, ILLINOIS
WILEY AKINS, Vice-President
General Manager
HERBERT S. WILGUS, Ph. D., Vice-President
Research Development
*DIVISION of the PETER HAND BREWERY COMPANY, Chicago, Illinois

SHEA
PLEDGES A DEPENDABLE SAFE DOMESTIC SOURCE OF A FEEDING GRADE OF
DICALCIUM PHOSPHATE
OF THE HIGHEST POSSIBLE QUALITY, PURITY AND AVAILABILITY
with the
LOWEST POSSIBLE INERT MATTER AND FLUORINE CONTENT

PRICES AND INFORMATION GLADLY SENT ON REQUEST
SHEA
CHEMICAL CORPORATION
Executive Offices: 1201 St. Paul, Baltimore 2, Md.
Plant Locations: Columbia, Tenn. • Adams, Mass.

BORDEN BASIC RESEARCH

Strengthens your position



The Nitrogen in this Feed has been SULFIXED for best utilization COMPLETE PROTEIN

"SULFIXED" is a new term and a new idea in livestock feeding. It is the symbol for Borden's recently patented discovery of the best sulfur-nitrogen ratios in feeds for dairy cattle, beef cattle and other ruminant animals.

What does "SULFIXED" mean to you? It means (1) an assurance that the sulfur-to-nitrogen ratio in your feeds is adjusted for *greater protein utilization;* (2) you are equipped to use synthetic sources of protein on a scientific basis; (3) your protein cost will be appreciably lower; (4) you can apply a *new,* proven selling idea for increasing your business in ruminant feeds.

• • •

The "SULFIXED" idea is gaining an enthusiastic reception throughout the trade. It is being welcomed by all sizes of feed manufacturers as a basic contribution to livestock nutrition.

This discovery is a good illustration of how Borden research probes the unknown. Borden does the exploring and pioneering in the fields of human and animal nutrition. The results are then made available to simplify and enhance *your* program of feed manufacturing and sales.

With such backing you can lift your feed business to a strong competitive position for the long pull. Ask for the Borden man to call and explain the "SULFIXED" patent and the greater-than-ever advantages of basic research in today's market.

A Vitamin Supplement for Ruminants, **Borden's BOSPRO,** in addition to providing Vitamins A and D, also supplies nutrient factors which are considered to enhance the activity of the rumen microflora resulting in more efficient feed utilization. Inquire as to its use.

The Borden Company
FEED SUPPLEMENTS DEPARTMENT
350 MADISON AVENUE • NEW YORK 17, N. Y.

Borden IS BASIC IN FOOD AND FEED RESEARCH

☆ Classified Ads ☆

Classified advertisements accepted until Wednesday each week for the issue of the following Saturday.
Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies.

Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $8 per column inch.

MACHINERY FOR SALE

CORN CUTTER AND GRADER, WITH OR without power. McLaughlin, Ward & Co., Jackson, Mich.

THREE FRENCH 3-SECTION MECHANIcal screw presses. Swift & Co. Soybean Mill, P. O. Box 68, Champaign, Ill.

WHIRLAWAY AIRBLAST CAR LOADERS —J. E. Hagan Mill Machinery, Jefferson City, Mo.

USED PURITAN TON MIXER WITH FIVE H.P. motor available now, good condition. A. Elmer Crilley, 3865 Holdrege St., Lincoln, Neb.

TWO-TON MUNSON HORIZONTAL BATCH Mixer, like new, with or without power. Immediate delivery. McLaughlin, Ward & Co., Jackson, Mich.

CALIFORNIA PELLETING MACHINE — Heavy duty; reconditioned and guaranteed. Aaron Equipment Co., 1347 S. Ashland Ave., Chicago 8, Ill.

13" PAPEC MILL; BAUER 60 H.P. MILL; 15" Big Chief with 40 H.P. motor, also others. Write or phone us. Prater Pulverizer Co., Chicago 50, Ill.

PELLET MILLS — ONE CALIFORNIA 50 H.P., heavy duty; one California 30 H.P., master; both excellent condition. Assorted dies. Priced right. Call or write John Landes, Gooch Mills, Salina, Kansas.

DISMANTLING COMPLETE SOYBEAN oil meal processing plant in southern Michigan. Will sell any part or all. Prices will surprise you. Immediate delivery. McLaughlin, Ward & Co., Jackson, Mich.

Hammer Mills - Molasses Blenders
Batch Mixers - Corn Shellers - Pneumatic Grain Conveyors - Bag Stackers
Permanent Magnets. New and rebuilt.

A. M. SORENSON— MILLING EQUIPMENT
1904 So. Akard P. O. Box 5808
DALLAS, TEXAS

BULK TRAILER
"Like New"
A Real Buy

Goldsberry, 12-ton capacity. Aluminum construction, four compartments, individual shutoffs. Self-unloading body, swivel spout discharges to maximum height of 17 ft. Body length 20 ft., over-all height 12 ft. Ideal for bulk deliveries or large feeding operation. Reasonably priced.

Let us give you more details.

Address 210, Feedstuffs
Minneapolis 2, Minn.

I will sell AT PUBLIC AUCTION on Thursday, Dec. 4, 1952, at 1348 Block St., Baltimore, Md., at 10 a.m. (E.S.T.), in single lots, no confirmation necessary:

SCREW CONVEYORS—2,451 ft. steel encased, 4", 6", 7", 8", 9" and 12" dia., most lengths motor driven.

BUCKET ELEVATORS—19 steel encased, from 16' to 74' c.c. Only noncorrosive material handled.

STEEL BINS, HOPPERS and STORAGE TANKS—120, all ¼" and heavier plate, some open top rectangular, some V-shaped; some closed horizontally; mostly welded construction.

MOTORS—Large quantity, all 3/60/220 V., ½ H.P. to 100 H.P.

WEIGH HOPPERS—4' dia. with suspension scales.

AIRVEYOR — Pneumatic Airveying System, incl. 225' of 3" pipe and hoppers.

SCREENS—Three 4'x5' No. 38 Tyler Hummer Screens.

MISCELLANEOUS — Apron Conveyors, Belt Conveyor, Gear Reducers, 4-ton Monorail Crane, Air Compressors, etc.

INSPECTION—From Nov. 20 to date of sale. Send for SALE CATALOG.

BERNARD MAGRILL
AUCTIONEER
194 BROADWAY, BROOKLYN 11, N. Y.
PHONE: STagg 2-4574-4575

MACHINERY FOR SALE

48,000-BU. ELEVATOR WITH 110,000-BU. annex. All modern, concrete construction with both track scale and truck scale. Good trackage. Address 198, Feedstuffs, Minneapolis 2, Minn.

CORN SHELLERS; MIXERS; SUTTON, Steele & Steele grain cleaners and stoners; manlift; Richardson scales; elevators; dryers; engines; roll chills 6x12 to 9x36; double and 3 high roller mills; attrition mills, belt and motor driven; hammer mills, all makes and sizes. Hughes Engineering Co., Wayland, Mich.

FOR SALE — HORIZONTAL POWDER Mixers, Filter Presses including Sweetlands, Screens and Sifters, Grinders and Pulverizers, Vacuum Shelf Dryers, Expellers, Louisville Rotary Steam Tube Dryers, two St. Regis No. 100 L. S. Flour Packers with scales and motors. Consolidated Products Co., Inc., 19 Park Row, New York 38, N. Y., Barclay 7-0600.

FOR SALE — VERTICAL FEED MIXER, 2,000 lb. with molasses attachment; three Stainless Steel Meal Coolers and five Anderson Dryers with 5 H.P., TEFC motors, all with capacity 120 bu. hr.; two stands 9x30 Great Western two-pair high roller mills; one stand 9x30 Allis ball-bearing double roller mill; 12" continuous belt manlift, 70 ft. high; rebuilt Richardson Grain Scales and Union Special Bag Closers. J. E. Hagan Mill Machinery, Jefferson City, Mo.

BUSINESS OPPORTUNITIES

WANTED—ELEVATOR AND FEED MANufacturing plant located in north central states. Address 130, Feedstuffs, Minneapolis 2, Minn.

FEED AND FLOUR MILL—SMALL TOWN, On railroad siding. Priced right for cash. Reason for selling—death of owner. Address 225, Feedstuffs, Minneapolis 2, Minn.

WHEN YOU WANT TO BUY AN ELEvator or feed mill, see or write us your needs. We have some good ones in Ohio, Indiana, Illinois. Mid-West Business Exchange, Plymouth, Ind.

ATTENTION FEED MANUFACTURERS IN MIDWESTERN STATES PARTICULARLY

We are now offering two uniform standardized fish meal blends. Both blends contain unusually large amounts fish meal and fish by-products. These products of prime necessity and value now with present uncertain fish meal markets. Let us have your inquiries.

Address 154, Feedstuffs
114 East 40th St., New York, N. Y.

MACHINERY FOR SALE

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Address 3774, Feedstuffs, Minneapolis 3, Minn.

ONE SIGNAL AUTOMATIC BAGGING Scale, like new; regular selling price $425, special price $325. Burrows Equipment Co., 1316 Sherman Ave., Evanston, Ill.

WHEN YOU ARE IN THE MARKET FOR new or used mill machinery, electric motors or any other equipment, write J. E. Hagan Mill Machinery, Jefferson City, Mo.

REBUILT BARGAINS—ONE 75 H.P. JAY Bee Hammermill with dust proof motor; five smaller mills, various makes; one Speed King Corn and Cob Mill; large assortment grain crimping roller mills traded in on our new 12" diameter line; one adjustable suspended bag closer; augers, blowers, grain elevators, engines, electric motors. H. C. Davis Sons Mill Machinery Co., Dept. R-BF, Bonner Springs, Kansas.

Screens - Hammers - Bearings
NEW and REBUILT MILLS
Write for Prices
INDIANA GRAIN MACHINERY Corp.
Indianapolis, Ind.
420 S. Meridian St. Riley 3235

HELP WANTED

SUPERINTENDENT FOR FEED MILL, located 35 miles northwest of Chicago. Splendid opportunity. Address 197, Feedstuffs, Minneapolis 2, Minn.

SALES MANAGER WANTED — WELL rated and long established rope, baler twine, binder twine, wrapping twine firm seeking experienced man to help set up distributors throughout the U.S. Permanent position with good future possibilities. Also exceptional opportunity for experienced salesmen—good live territory open. Write Bob Stone Cordage Co. (National Twine Distributor), Charlton, Iowa.

Use Feedstuffs WANT ADS for RESULTS

HELP WANTED

SALESMAN—NATIONALLY ADVERTISED line of baler and binder twine. Several exclusive territories open. Prefer man with other lines. State territory covered. Liberal commission. Address 212, Feedstuffs, Minneapolis 2, Minn.

OPPORTUNITY FOR EXPERIENCED MAN capable complete management 100 tons per 8-hour day feed manufacturing facilities, principally range feed. Production and sales potential far from maximum. Good future for investment or stock and cash bonuses for results. Address 220, Feedstuffs, Minneapolis 2, Minn.

CHEMIST TO TAKE CHARGE OF CONtrol laboratory at feed mill in Midwest. Good opportunity with progressive company. Send qualifications and experience. Address 173, Feedstuffs, Minneapolis 2, Minn.

WANT EXPERIENCED FEED SALESMEN for territory in Mississippi and Louisiana. Car, salary and commission. Permanent position. Send snapshot and details of your experience. J. T. Gibbons, Inc., Box 284, New Orleans, La.

SALESMAN FOR SOUTHERN CALIfornia to sell top line vitamin premixes of well known local manufacturer with ample backing from sales agent and manufacturer. Prime requisite willingness to work hard and ability to assist buyers in feed formulation. Prefer agricultural school graduate with nutritional experience in mid-thirties who has had previous selling experience and a good salesman. Salary, bonus plan and expenses. Apply in detail. Address 178, Feedstuffs, Minneapolis 2, Minn.

General Sales Manager

AAA1 Midwest feed manufacturer with dynamic long term growth program offers outstanding opportunity to top notch man with imagination, drive, leadership and ability and a proven record of success in the feed or other farm products industry. Major responsibilities include selecting, training, retraining and leading men who can and will do an aggressive, effective feed merchandising job and build a sound dealer organization. College degree and age 30 to 40 desired. All replies confidential.

Address 209, Feedstuffs
Minneapolis 2, Minn.

SHELLBUILDER COMPANY

Producers of Crushed Oyster Shell for Poultry

We need traveling brokers who call regularly on the feed trade.
We have some territories open to men working west of the Mississippi River.
We can make you a very attractive and profitable proposition. If interested write in detail giving the following information:

(1) Territory you travel and frequency of trips.
(2) What lines you are now selling.
(3) Length of time with your present connections.

SHELLBUILDER COMPANY
620 Melrose Bldg. Houston 2, Texas

WANTED: Opportunity to Buy Feed Mill

Sales Manager, Production Manager, Grain Buyer and Nutritionist seek opportunity to purchase feed mill, with or without dealer organization, or to join organization as management group with option to buy.

Address 222, Feedstuffs, Minneapolis 2, Minn.

AN AUCTION

PROCESSING PLANT—THE REAL ESTATE and COMPLETE SOYBEAN PROCESSING EQUIPMENT

(Equipment piece-by-piece)

Monday, Dec. 15 at 1 p.m., Hiawatha, Kansas (85 miles N.W. of Kansas City). Real estate: Ideal for feed manufacturing, grain elevator, fertilizer mfr., hybrid seed corn, general manufacturing. Bldg. No. 1, alumin m on steel, 42x80, joining is a 24x20 bldg., boiler room 26x48 joins with 100 h.p. natural gas boiler, adjoining, too, is a 26x17 bldg., 45' high w/grain dump, legs, etc., 40,000 lb. F-B truck scales. Bldg. No. 2, Butler steel 40x80 on RR spur. Bldg. No. 3, Butler steel 40x100 on RR spur, 60,000 bu. capacity. All buildings have reinforced concrete floors, all city utilities, are in excellent repair, built in '48. Five st.l grain storage tanks 76,000 bu. capacity w/overhead and underground conveyors from RR to buildings and tanks. Total grain capacity 172,000 bu. Immediate possession. (Formerly Thomson Soya Mill.)

Equipment: Complete equipment for soybean processing incl.ding: sparkler filter No. 3387; Air scrubber complete; two rising film evaporators w/two vapor flash tanks, complete; rotameters; 60' Redler Stephens-Adamson conveyors; 6 stand high toaster and cooker; two Johnson flaking rolls; vib feeder; clipper cleaner; dryers; 3 stand Great Western cracking rolls; turbine pump; steam jacketed conveyors; electric motors, enclosed, from 1 to 30 H.P.; and many, many other pieces. Equipment to be sold piece-by-piece and then offered as a complete unit.

Write-wire-call auctioneers for complete illustrated sale bill.

REAL ESTATE AND EQUIPMENT POSITIVELY SELL TO HIGHEST BIDDERS WITHOUT LIMIT.

FORKE BROTHERS, *The Auctioneers*
321 Sharp Bldg. LINCOLN, NEBRASKA Phone 2-7045

SITUATIONS WANTED

COMPETENT MANAGEMENT — PRODUCtion executive, experienced large and small feed, flour, prepared mix plants, desires position with small company. Address 211, Feedstuffs, Minneapolis 2, Minn.

LICENSED GRADUATE VETERINARIAN interested in connecting with feed industry. Have experience as practitioner with government agencies and as a salesman veterinarian. Background of nutrition, veterinary medicine and sales of great value in feed lines. Address 204, Feedstuffs, 141 W. Jackson, Chicago 4, Ill.

B.S.C. GRADUATE CHEMIST WITH AGRIcultural and nutritional background, at present production superintendent for leading national pharmaceutical manufacturer, wishes to become associated with feed manufacturer as junior executive with opportunity to purchase considerable interest. Address 179, Feedstuffs, Minneapolis 2, Minn.

REPRESENTATION SHORTLY AVAILable for Delmarva Peninsula, hard-hitting, well-trained feed salesman with years of extensive sales and service work experience. Interested in feed or lines pertaining to the broiler industry. Trade and bank references. Compensation: moderate drawing account. Reply giving pertinent details of your offerings. Address 159, Feedstuffs, Minneapolis 2, Minn.

FEED PLANT MANAGER WITH 22 years' experience in production and sale of livestock and poultry feeds. Services available in near future. Reason, change in ownership. Good financial, trade and employer references. Experienced in buying, trained in nutrition and up-to-date on formulation. Accounting background familiar with transit. Understand dealers' problems, talk farmers' language, write ads and train salesmen. Energetic, systematic and efficient. Can set the pace and get cooperation. Address 214, Feedstuffs, Minneapolis 2, Minn.

MACHINERY WANTED

WANTED TWO SUPER DUO EXPELLERS—May consider Duo or RB for other operation. Address 1594, Feedstuffs, Minneapolis 2, Minn.

SCALE WANTED — WAREHOUSE TYPE, about 2,000 lb. capacity, platform approximately 8 to 10 feet long. Rogers Grain & Feed Co., Ainsworth, Neb.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

WANTED — 60 H.P. HUGHES ATOMIC Screen Change Hammermill. One- and two-ton horizontal and vertical mixers. Also used 50 H.P., 1,800 R.P.M. and 75 H.P., 1,100 R.P.M. motors. Address 224, Feedstuffs, Minneapolis 2, Minn.

POULTRY SCHOOL SLATED AT BOZEMAN ON DEC. 3-5

BOZEMAN—The Montana All-Industry Poultry School and Show will be held at Montana State College, Bozeman, Dec. 3-5. All branches of the poultry industry will be represented and three state associations will be meeting at that time. These are: Montana Hatcherymen's Assn., Montana Feed Manufacturers and Dealers Assn. and Montana Turkey Federation.

Five out-of-state speakers will be on the program: William Kohlmeyer, chairman, department of poultry husbandry, South Dakota State College; C. A. Michener, field supervisor, Dawe's Laboratories, Inc., Boulder, Colo.; Dr. Lawrence Morris, professor of animal husbandry, Brigham Young University, Provo, Utah; Harold G. Walkup, Jr., agricultural economist, State College of Washington, Pullman, and R. C. Wright, sales representative, Capps & Lowe, Inc., Seattle.

POULTRYMEN FROM 3 NATIONS AT SCHOOL

MYERSTOWN, PA.—An English agricultural fellowship winner, several Canadians and hatcherymen and feedmen from nine states attended the poultry health clinic held by Whitmoyer Laboratories, Inc., here. The clinic concluded the 52nd session of the Whitmoyer poultry health and nutrition school.

Geoffrey R. L. Sykes, from F. & S. Sykes, Ltd., Salisbury, England, was among the students. Mr. Sykes operates a 900-acre farm in England. He is in this country on a 6-months' agricultural fellowship provided by the Nuffield Foundation.

Dr. E. I. Robertson, director of nutrition for John W. Eshelman & Sons, Lancaster, Pa., was guest speaker at the banquet and open forum. Members of the Whitmoyer technical staff conducted the daily study sessions. Students tested their poultry disease diagnosis ability.

The next poultry school clinic will be Jan. 7-9. Information may be obtained by writing Dr. James R. Wiley at Whitmoyer Laboratories, Inc., Myerstown, Pa.

BULK HANDLING ADDED

CLOVIS, N.M.—El Rancho Milling Co., Clovis, N.M., recently completed construction of a bulk handling plant to serve a three-state area, according to Austin Brooks, general manager of the firm. A wide variety of feed ingredients will be handled, either dry or with molasses.

Standard steel elevators, belt and bucket type, available from stock. Ten Heavy Duty sizes, from 300 to 10,000 Bu./Hr., for continuous service and four Light Duty sizes, from 150 to 750 Bu./Hr., for intermittent service. We also manufacture screw conveyors and hoppers. Send your requirements for complete information.

GODSHALK
Sheet Metal Fabricators
BANGOR, PA.

JOIN SUCCESSFUL DEALERS!
SELL Nutrena FEEDS

Hatchery Holds Open House; A. E. Staley Feed Featured

BLOOMINGTON, ILL.—More than 1,500 central Illinois farmers attended an open house tour of the A. B. Hatchery Nov. 1 as the guests of Yale and William Butler, father and son co-owners, and top executives of the A. E. Staley Manufacturing Co., Decatur.

The A. B. Hatchery is an exclusive distributor of the Staley complete line of livestock and poultry feed and is one of a system of dealer outlets expected later to number in the hundreds, according to Edward Scheiter, executive vice president of the A. E. Staley company, who was present to welcome the visitors.

Other A. E. Staley executives present included Paul R. Ray, manager of the soybean division; A. E. Staley III, advertising director; Dr. Warren N. McMillen, director of feed nutrition research, and Clyde Thompson, manager of formula feed sales.

Mr. Scheiter stated at a press luncheon that the A. E. Staley Manufacturing Co., a pioneer in corn refining since 1912 and in soybean processing since 1922, has launched a greatly expanded formula feed business. The firm has for many years produced cattle feeds, specializing in range pellets for the large western cattle producing areas, he said, and now has intensified its feed production to include scientifically formulated feeds for all classes of livestock and poultry.

Additional feed plant capacity is planned at Decatur, and the company expects to acquire additional facilities in other states as its complete feed program develops.

Mr. Butler has been in the feed business in Bloomington for many years. His son recently joined him as a partner, having studied feed nutrition. The store is modern in every respect, backed by warehouse space equipped with truck loading docks and a railroad siding. Besides the complete line of Staley feeds, the A. B. Hatchery stocks sidelines of medicants, insecticides, poultry and hog feeding equipment, seeds and other allied lines.

OPEN HOUSE—On hand to greet central Illinois farmers who visited the opening of the A. B. Hatchery at Bloomington, Ill., Nov. 1 were several top executives of the A. E. Staley Manufacturing Co., Decatur, whose complete line of livestock and poultry feed the store handles exclusively. Shown, left to right, are Paul R. Ray, manager of the Staley soybean division; Yale E. Butler, owner of the store; Dr. Warren N. McMillen, director of Staley feed nutrition research, and Clyde Thompson, manager of formula feed sales.

GEORGE T. SMITH WED

FORT WORTH—George T. Smith, associated with his father in the J. Paul Smith Co., Fort Worth, feed broker and jobber, was married recently to Helen Catherine Terrell, daughter of Dr. and Mrs. Truman C. Terrell of Fort Worth.

MOLAS-O-FIER
FITS ALL MIXERS
Mixes Betaine, Choline, Molasses, Buttermilk, Solubles, All Liquids into Dry Feeds. Easier, better, faster blending. Portable. Low cost.
Write CARROLL SWANSON
620 Des Moines Bldg.
Des Moines, Iowa

TURN MOISTURE DISCOUNTS INTO PROFITS WITH AN . . .
ARID-AIRE GRAIN DRYER
ARID-AIRE MFG. CO.
3981 ZARTHAN AVENUE • MINNEAPOLIS

METHOD FOUND TO CUT SELENIUM POISONING

LARAMIE, WYO.—Ranchers who graze livestock on seleniferous areas now can take some measures to reduce the toxicity of selenium poisoning, the University of Wyoming reports.

Since 1944, studies have been made along this line at the university's agricultural experiment station. O. A. Beath, department head, and Dr. Irene Rosenfeld, pharmacologist, worked on the project.

It was found that by increasing the protein and vitamin A intake of the sheep, the quality of the diet was improved to the extent that the poisonous effects of selenium were decreased. If the selenium intake was reduced or stopped and a high protein diet was continued, the animals recovered from selenium poisoning within a short time and the selenium was completely eliminated in about 30 days. If, however, the protein content of the diet was low, it was found that the recovery was slow or, in some cases, the animals died.

Animals suffering from selenium poisoning have a lower vitamin A and ascorbic acid level in the blood which, according to the investigators, may explain the malformations found in infected lambs at birth. Investigations by other experimenters have shown that vitamin A deficiency does produce malformations.

It was also found that iodine increases the susceptibility of animals to selenium poisoning. The researchers recommend that in selenium-occurring areas, non-iodine-contaning salts should be used.

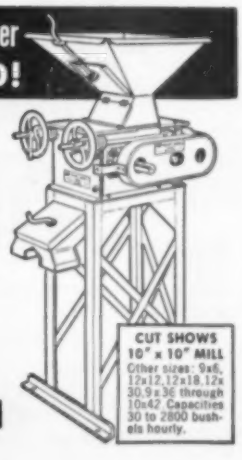
DEHYDRATORS TO MEET

DES MOINES—Iowa dehydrators will hold a special meeting in the Palm Room at Hotel Fort Des Moines here during the annual convention of the Western Grain & Feed Assn., scheduled for Nov. 24-25.

LA BUDDE
MILWAUKEE, WIS.
MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 44 OTHER FEEDS

ONE CALL BUYS ALL!
Just one call brings you in touch with experienced feed specialists who will fill your orders at I. S. Joseph, whether you call for Linseed Oil Meal, Millfeeds, Clear flours, fertilizers, or other specialty items. 38 years of friendly, efficient service at I. S. Joseph, your feed headquarters . . . Phone for market quotations today . . . Call Lincoln 8431.
I. S. JOSEPH CO., INC.
Flour Exchange Bldg.
Minneapolis, Minnesota
Lincoln 8431
DEHYDRATED ALFALFA MEAL
LINSEED OIL MEAL
SOY BEAN OIL MEAL
MILL FEEDS
CLEAR FLOUR
FERTILIZER
BEET PULP
OTHER SPECIALTY ITEMS

Finally! a Genuine Roller-Crimper EVERYONE CAN AFFORD!
You certainly won't enter another season without a crimper—and here's exactly what you've been waiting for!—BIG CAPACITY, LOW POWER, LOW UPKEEP KRIMPER-KRACKER! 100% practical, only 71" high overall.
One horsepower up. Genuinely roller crimps oats, barley, wheat, rye, shelled corn, milo maize, for *profits* of 25¢ to 50¢, *EVEN ONE DOLLAR* Gross Per CWT.
THE GRANULATOR, Feed Milling's Greatest sensation, handles CORN COBS - EAR CORN - SHUCKS AND HAY!
Write for FREE samples and literature.
At income tax time louder screams come from the Davis-equipped plants. Our program leads to the newer and better profits!
H. C. DAVIS SONS' MILL MACHINERY CO.
Dept. FH-11 Bonner Springs, Kansas



this BIG PIG went to market...

and brought a fat profit...

thanks to the LOW COST of feeds enriched with

PACO DISTILLERS

DRIED MOLASSES

SOLUBLES

For Only Two Cents a Pound

($40.00 per ton—Bulk basis shipping point)

you can buy a dependable and potent yeast fermentation ingredient containing good balanced Protein . . . B-Vitamins . . . Essential Minerals plus important Unidentified Growth Factors. Paco Distillers Dried Molasses Solubles is Granular, Free Flowing, Dust Free, Palatable—for all Poultry, Cattle and Swine Feeds . . . Immediate and Deferred shipment—Reasonable Freight Rates to all parts of the country.

Phone LOCUST 4-1400 for details
Department A

PUBLICKER INDUSTRIES INC.
1429 Walnut Street
Philadelphia 2, Pa.

THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available by mail from Feedstuffs correspondents, but are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Buffalo: Demand good; trend steady to upward; supply scarce; 20% 150,000 vitamin A, nominal $93; 17%, 100,000 vitamin A, nominal $87; 13% ½ in. $65, nominal.

St. Louis: Demand fair; supply adequate on dehydrated, limited on suncured; dehydrated, 17% $76.90 (nominal), 100,000 A, St. Louis; dehydrated, 17% no A guarantee $71.90, St. Louis; suncured No. 1 fine ground, 13% $63.80, St. Louis.

New Orleans: Demand fair; trend steady; supply adequate; 17% dehydrated, vitamin A guaranteed $79@80; non-guaranteed $76@77; 15% $71@73.

Seattle: Demand slow; supply ample; 15% fine grind $57.50 ton, carlots; dehydrated $78 ton, delivered, carlots.

Omaha: Demand fair; supply good; 17% dehydrated, 50,000 A $66; 17% dehydrated, 100,000 A $70; No. 1 suncured, fine ground $54; No. 2 ¼ in. suncured $43.

Ft. Worth: Demand good; supply ample; dehydrated, 100,000 A, 17%, California origin, prompt shipment $78.50; limited amount Nebraska-Kansas origin, prompt $78.50@80, delivered TCP.

Portland: Demand slow; supply ample; trend unchanged; 15% suncured $45, f.o.b. Idaho; 15% suncured $58, delivered; dehydrated $62.50, f.o.b. California.

Boston: Demand steady; supply tight; dehydrated, 17% $84, nominal; suncured 13%, Colorado $70.50, Nebraska $58.

Indianapolis: Demand fair; trend steady; supply ample; suncured, 13% $62; dehydrated, 17% $82.

Chicago: Demand fair; supply tighter; 17% with 100,000 units vitamin A guaranteed $74.70@75.70 ton; 20% with 150,000 units A $90.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $75.

Milwaukee: Demand good; supply scarce on dehydrated, fair on suncured; western dehydrated, 17% with 100,000 A guarantee $76; western suncured, 13% $57, 15% $59.50.

Minneapolis: Demand remains limited; and prices are about unchanged. Quotations: 17% dehydrated, 100,000 units of vitamin A guaranteed $74@76.50; 13% suncured, No. 1 fine ground $56.50.

Los Angeles: Demand good; trend slightly weaker; supply ample; 15% suncured $55@56; 17% dehydrated $65.

Kansas City: Market firm with demand fair to good; prices steady with 17% dehydrated alfalfa meal with 100,000 units of vitamin A guaranteed on arrival $70@72.50, sacked, Kansas City; up to $75, sacked, Kansas City, quoted for December with no trades yet reported.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 units vitamin A $80@83.

Philadelphia: Demand dull; supply light; 17% dehydrated $86.

ALFALFA PELLETS

Omaha: Demand fair; supply good; 17% dehydrated, 100,000 A $73; No. 1 suncured $57.

BARLEY FEED

New Orleans: Demand slow; trend steady; supply sufficient; pulverized $69.50.

San Francisco: Demand fair; supply ample; rolled $84, ground $83.

Ogden: Supply average; rolled $68@73, whole barley $63@68.

Baltimore: Demand moderate; supply adequate; $64 ton, sacked.

Chicago: Demand moderate; supply adequate; $55 ton, sacked.

Milwaukee: Demand fair on pulverized, good for needles; supply fair on pulverized, scarce on needles; pulverized, white $63, feed $57; needles $1.25@1.39 bu.

Seattle: Demand good; supply limited; whole $82 ton, ground $85 ton, rolled $85 ton, all ex-warehouse, l.c.l., sacked.

Boston: Demand and supply fair; $60.

Indianapolis: Demand normal; trend higher; supply sufficient; crimped barley $86, sacked; whole barley $81, sacked.

Portland: Demand good; trend higher; supply ample; rolled $85, ground $83.

Philadelphia: Demand moderate; supply fair; pulverized $62.50.

BLOOD FLOUR

New Orleans: Demand slow; trend steady; supply adequate; $108@110 local plants.

Louisville: Demand fair; trend steady; supply ample; $105@110 ton.

BLOOD MEAL

New Orleans: Demand poor; trend steady; supply adequate; $108@110, local plants.

San Francisco: Demand fair; supply ample; $6.60 a unit of ammonia; screened $6.50 a unit of ammonia.

Chicago: Demand fair; supply adequate; $140 ton, sacked.

Seattle: Demand slow; supply ample; $100 ton, f.o.b. local packing plants.

Portland: Demand fair; supply ample; trend unchanged; $130.

Louisville: Demand fair; trend steady; supply ample; $105@110 ton.

BONE MEAL

Cincinnati: Demand fair; trend steady; supply ample; $53@55 ton, sacked, f.o.b. Cincinnati.

New Orleans: Demand fair; trend steady; supply ample; $70@74.

San Francisco: Demand good; supply fair; $67.

Ft. Worth: Demand good; supply limited; l.c.l., fine $4.30 cwt., f.o.b. Ft. Worth; carlots 70 to 75% B.P.L. $74, prompt, f.o.b. cars, Houston.

BONE MEAL (STEAMED)

Buffalo: Demand fair; trend steady; supply ample; $93@95, basis Buffalo.

St. Louis: Demand fair; supply adequate; $110, sacked.

New Orleans: Demand fair; trend steady to lower; supply ample; $75@80.

Atlanta: Demand slow; trend steady; supply ample; $67.50, f.o.b. southern ports.

San Francisco: Demand good; supply ample; $80.

Chicago: Demand fair; supply adequate; $90@95 ton, sacked.

St. Paul: $92@100.

Portland: Demand fair; supply ample; trend unchanged; $105, imported $97.

Indianapolis: Demand light; trend steady; supply adequate; $102 ton.

Boston: Demand fair; supply good; $86.

Los Angeles: Demand good; trend steady; supply adequate; domestic $87.

Louisville: Demand good; trend steady; supply fair; domestic $105, imported $80.

BREWERS' DRIED GRAINS

Buffalo: Demand good; trend steady; supply scarce; 24% western $54.50@55.50, Boston; 26% $52.50@53.50, New York or Philadelphia basis.

St. Louis: Demand very strong; supply limited; $47@50 bulk, $59.40 sacked; seller's ceiling price time of shipment, if higher.

New Orleans: Demand good; trend steady; supply scarce; $63.50@65.

Omaha: Demand good; supply poor; $53.70.

Milwaukee: Demand good; none available; ceiling prices.

Chicago: Demand good; supply very tight; $77@78 ton, sacked.

Ft. Worth: Demand unsatisfied; none available, nominal $66@67, delivered Ft. Worth.

Boston: Demand good; supply light; Canadian 22% $76.

Louisville: Demand good; trend steady; supply light; $63.50.

Cincinnati: Demand good; trend steady; none available; $65@70.

Philadelphia: Demand very good; supply very scarce; $73.35, nominal.

San Francisco: No offerings; no quotations.

BREWERS' DRIED YEAST

Buffalo: Demand strong; trend steady; supply tight; carlots if available, nominally $280 ton, basis Buffalo; less than carload via truck if available $287 ton.

San Francisco: No offerings; no quotations.

St. Louis: Demand good; supply limited; 11¢ lb. in ton lots; 12¢ less than tons; no carlot quotations.

Chicago: Demand good; supply limited; 12½¢ in carlots when available; 13@14¢, l.c.l.

Milwaukee: Demand good; supply limited; 12¢ lb. in carlots; 13¢ l.c.l.

Chicago: Demand good; supply limited; 12½¢ lb., in carlots when available; 13@13½¢ l.c.l.

Pittsburgh: Demand heavy; supply light; carlots, when available 10½¢ lb.; 5-ton lots 11½¢; ton lots 12¢.

New Orleans: Demand heavy; supply light; carlots, when available 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

New York: Demand heavy; supply light; carlots, when available 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

Cincinnati: Demand heavy; supply light; carlots, when available 10½¢ lb.; 5-ton lots 11½¢; ton lots 12¢.

Omaha: Demand good; supply poor; 11½¢ lb., carload lots; 12½¢, less than carload.

Boston: Demand quiet; supply scarce; 11½¢ lb., nominal.

Louisville: Demand good; trend steady; supply light; $230 ton.

BUTTERMILK-CONDENSED

Buffalo: Demand fair to slow; trend steady; supply adequate; 6@6½¢.

Ogden: Supply normal; $6.25, 100-lb. drum.

San Francisco: Demand fair; supply good; $5.35 cwt.

Chicago: Demand slow; supply ample; $4 cwt. in carlots.

Minneapolis: Market steady; demand fair; supply ample; $5 cwt.

Indianapolis: Demand average; trend unchanged; supply good; 100-lb. bags $5.65, in barrels $4.90.

Louisville: Demand fair; supply ample; trend unchanged; $5.75 cwt.

Philadelphia: Demand light; supply fair; $5.25.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Demand steady; supply ample; crystals $12.14, flour $9.49.

Buffalo: Demand slow; supply ample to good; crystals $12.94, flour $10.19.

Toledo: Demand steady; supply ample; crystals $14.82, flour $11.77.

Linecrest, N.J.: Crystals $8.80, carlots; flour $5.75.

Boston: Demand steady; supply ample; crystals $13.37, flour $10.62.

CALCIUM CARBONATE

New Orleans: Demand good; trend firm; supply ample; $10@10.50, Louisiana origin.

Seattle: Demand steady; supply good; $12 ton, ex-warehouse, truck lots.

Portland: Demand good; supply ample; trend unchanged; $14.

Minneapolis: Prices depend on potency of mix; KI .5 and 25-lb. $MnSO_4$, $15.40, plain calcium $9.40 ton; .5 KI $13.

Los Angeles: Demand good; trend steady; supply adequate; $10.72@12.72.

CHARCOAL

New Orleans: Demand light; trend steady; supply ample; 40-lb. bags oak charcoal $1.75; 50-lb. bags poultry charcoal $2.

San Francisco: Demand steady; supply ample; $59.50.

Chicago: Demand fair; supply ample; poultry charcoal $93 ton in 50-lb. multiwalls (ceiling).

Los Angeles: Demand slack; trend steady; supply ample; $60.

Boston: Demand and supply light; $78, f.o.b. Texas.

COCONUT MEAL

Bayonne, N.J.: 20% protein solvent extracted meal $73.50 a short ton in bulk, $78.50 a short ton in good used bags.

San Francisco: Demand and supply fair; $78.

Seattle: Demand slow; supply tight; $88, Tacoma, carlots, prompt; imported $84, ex-dock, Seattle, 60-day arrival.

Los Angeles: Demand fair; trend firmer; supply adequate; spot $86@88; offshore $84@85.50.

COD LIVER OIL (FORTIFIED)

New York: 300 ICU, 1,500 A 23@24½¢; 300 ICU, 2,250 A 25½@26½¢; 300 ICU, 3,000 A 28@29½¢; 600 ICU, 1,500 A 24@25½¢; 600 ICU, 3,000 A 30@32¢.

Boston: Demand good; supply ample; 600 D, 2,250 A 24½¢ lb.; 300 D, 2,250 A 25½¢; 300 D, 1,500 A 23¢.

CONDENSED FISH SOLUBLES

Boston: Demand good; supply fair; $80.

CORN GERM MEAL

St. Louis: Demand very strong; supply limited; $64, bulk.

New Orleans: Demand poor; trend steady; supply ample; $74.50@76.50.

Louisville: Demand fair; trend steady; supply ample; $76.80.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis; bulk basis $6 less)

Minneapolis: Feed $72.77, meal $92.77.
Atlanta: Feed $79.92, meal $99.92.
Birmingham: Feed $78.18, meal $98.18.
Boston: Feed $77.15, meal $97.15.
Chicago: Feed $67, meal $87.
Cleveland: Feed $74.04, meal $94.04.
Denver: Feed $76, meal $96.
Ft. Worth: Feed $74.50, meal $94.50.
Indianapolis: Feed $71.50, meal $91.50.
Kansas City: Feed $67, meal $87.
Louisville: Feed $73.11, meal $93.11.
New Orleans: Feed $75.88, meal $95.88.
New York: Feed $76.69, meal $96.69.
Norfolk: Feed $76, meal $96.
Philadelphia: Feed $76.23, meal $96.23.
Pittsburgh: Feed $74.50, meal $94.50.
St. Louis: Feed $67, meal $87.

COTTONSEED OIL MEAL

Buffalo: Demand good; trend steady to upward; supply adequate; 36% $95.25@96.25; 41% $98.50@99.50, basis Boston.

New Orleans: Demand good; trend steady; supply scarce; 41% $105.

San Francisco: Demand good; supply scarce; $93.28.

Atlanta: Demand fair; trend steady; supply ample; 41% $85, f.o.b. Georgia mills, $84, f.o.b. Alabama mills.

Seattle: Demand fair; supply good; $96, ex-dock for imported, spot and nearby; domestic 41% $87.50, California shipping points.

Ogden: 41% $103@105.

Omaha: Demand strong; supply limited; $102@105, sacked.

Memphis: Demand poor; trend steady; supply ample, prime 41% solvent $85.25, sacked.

Chicago: Demand good; supply fair; $96@100 ton, sacked, ceiling prices.

Minneapolis: Market steady; demand fair; supply limited; $87.25, Memphis.

Ft. Worth: Demand fair; offerings sufficient; domestic, carlots, 41% $95@96, delivered Ft. Worth, prompt-November shipment.

Boston: Demand fair; supply good; 36% $86, 41% $93.

Indianapolis: Demand fair; supply sufficient; trend unchanged; 41% $100 ton.

Los Angeles: Demand good; trend steady; supply improved; $86, sacked.

Kansas City: Interest slow; market still at ceiling of jobbers plus freight or equal to $97@100, sacked, Kansas City.

Louisville: Demand good; trend steady; supply ample; $94.80 ton.

Portland: Demand fair; trend firm; supply limited; domestic 41% $88.50, Los Angeles.

Wichita: Demand slow; supply nil; 41% $102.

Cincinnati: Demand good; trend steady; supply tight; $96@97.50.

Philadelphia: Demand moderate; supply fair; $96.

A AND D FEEDING OIL

Buffalo: Demand and supply good; 200 D 27@27½¢ tanks, 29@29½¢ 50-drum lots; 3,000 A 29@29½¢, 50-drum lots; 4,500 A 28¼@28½¢ tanks, 30@30½¢ 50-drum lots; 750 A 20¾@21¢ tanks, 22@22¼¢ 50-drum lots; 750-300 21½@21¾¢ drums; 2,250-300 A 26¾@27¢.

New York: 300 ICU, 750 A 19⅛@20¼¢; 300 ICU, 1,500 A 22@23½¢; 300 ICU, 2,250 A 24⅛@25⅛¢; 300 ICU, 3,000 A 27@28½¢; 600 ICU, 1,500 A 23@24⅛¢; 600 ICU, 3,000 A 29@31¢.

Minneapolis: Straight A feeding oil 14¢ per million; 85 D $1.06 gal.; 300 D, 750 A 19½¢ lb.; 300 D, 1,500 A 22¢ lb.; 300 D, 2,250 A 24¢ lb., single drum lots.

Chicago: Demand fair; supply light; straight A feeding oil, with 100,000 units vitamin A per gram 11@11½¢ a million units of vitamin A, l.c.l., packed in 55 gal. druma, f.o.b. Chicago, druma included.

Milwaukee: Demand fair; supply adequate; 85 D, 100 A $1.50; concentrated vitamin oil, 300 A, 750 D 27½¢; 300 A, 1,500 D 28½¢; 300 A, 2,250 D 30¢.

Seattle: Demand steady; supply ample; 300 D, 2,250 A 20¢ lb., 300 D, 1,500 A 17¢ lb., 300 D, 750 A 15¢ lb., all ex-warehouse, druma included.

Boston: Demand improved; supply ample; 600 D, 1,500 A 23½¢ lb.; 300 D, 2,250 A 25¢; 300 D, 1,500 A 22½¢; 300 D, 750 A 18¢.

D ACTIVATED ANIMAL STEROL, POWDERED

New York: Demand good; trend steady; supply sufficient; 1,500 ICU pr. gm. 10@12.6¢ lb., ton lots, f.o.b. warehouse; 3,000 ICU 16@18¢.

Kansas City: Demand fair; trend steady; 11@12.6¢ lb., depending on carrier.

DEFLUORINATED PHOSPHATE

Portland: $80.
Wales, Tenn.: $64.25.
Tupelo, Miss.: $49.50.
Coronet, Fla.: $50.
Houston: $65.50.

DISTILLERS' DRIED GRAINS

Buffalo: Demand good; trend steady to higher; supply scarce to fair; domestic $80@82, Canadian $85@89.50, both Boston.

New Orleans: Demand slow; trend stronger; supply ample; $80@82.

Atlanta: Demand slow; supply tight; quotations at ceiling.

San Francisco: Demand fair; supply ample; solubles $82.

Boston: Demand quiet; supply short; Canadian $91.

Louisville: Demand strong; trend steady; supply light; bourbon distillation, in new bags, light $76.30, dark $78.30, solubles $95.30; rye distillation solubles $73.50; grains $65.50; in used bags $2.10 a ton less.

Cincinnati: Demand good; trend strong; none available; $78@80.

Philadelphia: Demand very good; supply nil; no quotations.

DRIED BEET PULP

New Orleans: Demand slow; trend steady; supply ample; $73.50@75, southern ports.

Atlanta: Demand slow; trend steady; supply ample; $72@74, f.o.b. Florida ports.

San Francisco: Demand good; supply fair; $69.28.

Ogden: $62@67.

Milwaukee: Demand good; supply scarce, plain and molasses $71.50.

Minneapolis: Market steady; demand light; supply limited; $66.

Boston: Demand quiet; supply improved; $75.50@77.

Los Angeles: Demand strong; trend firm; supply limited; $73.50, sacked, in paper.

Seattle: Demand heavy; supply exhausted; $68 ton, ex-warehouse, truck lots, nominal.

DRIED BUTTERMILK

Buffalo: Demand fair to good; trend steady; supply ample; 14@14½¢.

New Orleans: Demand fair; trend steady to easier; supply limited; $11.75@12.90.

San Francisco: No offerings; no quotations.

Ogden: Supply normal; $11.50, 100-lb. bag.

Milwaukee: Demand good; supply scarce; $13.50@14 cwt.

Chicago: Demand slow; supply adequate; $11.25@11.75 cwt., in carlots.

Minneapolis: Market steady; demand fair; supply ample; $11 cwt., carlots; $13.50 cwt., l.c.l.

Omaha: Demand and supply fair; $11.75.

Ft. Worth: Demand slow; supply sufficient; local and nearby production $12, f.o.b. Ft. Worth.

Boston: Demand fair; supply light; l.c.l. 14¢ lb.

Indianapolis: Demand very slow; trend unchanged; supply light but ample; $12.90.

Louisville: Demand fair; trend steady; supply normal; $270 ton.

Wichita: Demand fair; supply short; $11 cwt.

DRIED CITRUS PULP

Buffalo: No pulp or meal available at present time. Nominally $65 ton, f.o.b. western New York points.

Atlanta: Demand good for pulp, slow for

WANTED: UREA "262"

Submit details to Box 4077, Feedstuffs, 114 East 40th St., New York 16, N.Y.

SPROUT-WALDRON

OAT CRIMPERS

Crimped Oats assures Better Feed!

SW SINCE 1866

For equipment details, write

SPROUT-WALDRON & COMPANY, INC.
61 Logan St., Muncy, Pa.

meal; supply light on pulp, tight on meal; pulp $47.50, meal $47.50.

San Francisco: Demand good; supply fair; meal $53.50.

Los Angeles: Demand strong; trend firm; supply scarce; orange pulp $55, sacked, producers' plants.

New Orleans: Demand fair to good; trend steady; supply tight; $47.50@50, southern mills.

DRIED SKIM MILK

Buffalo: Demand good; trend steady to better; supply ample; 14¾@15¢.

New Orleans: Demand fair; trend steady; supply adequate; $15@15.50.

Seattle: Demand fair; supply very tight; nominal $17 cwt., ex-warehouse, l.c.l.

Portland: Demand good; supply limited; trend unchanged; $14.

Milwaukee: Demand good; supply scarce; $13.75@14.25 cwt.

Chicago: Demand slow; supply ample; nominally $12@13 cwt., in carlots.

Minneapolis: Market steady; demand fair; supply ample; $12 cwt., carlots; $14, l.c.l.

San Francisco: Demand and supply fair; 15½¢ lb.

Boston: Demand light; supply ample; 13½@14¢ lb.

Louisville: Demand good; trend steady; supply ample; $280 ton.

Philadelphia: Demand dull; supply light; $15.75.

DRIED WHEY

Buffalo: Demand fair to good; trend steady; supply ample; 7½@7¾¢.

New Orleans: Demand slow; trend steady; supply ample; $7.55@8 cwt.

Ogden: Supply normal; $8.25, 100-lb. bag.

Seattle: Demand steady, supply good; $8.25, ex-warehouse, l.c.l.

Ft. Worth: Demand good; supply moderate; carlots $8 cwt., sacked, delivered Ft. Worth or any Texas point or in ton lots out of warehouse, Ft. Worth.

San Francisco: Demand steady; supply good; $7.55.

Boston: Demand poor; supply ample; 7⅛@7¾¢ lb.

Kansas City: Demand moderate; trend steady; supply ample; $8 cwt.

Los Angeles: Demand good, trend steady; supply fair; $7.55@8.25 cwt.

Louisville: Demand good; trend steady; supply ample; $160 ton.

Portland: Demand good; supply limited; trend unchanged; $6.80.

Chicago: Demand fair; supply adequate; $8 cwt. in carlots.

Minneapolis: Market steady; demand fair; supply ample; $7.50@8 cwt.

Philadelphia: Demand dull; supply light; $9.75.

FISH MEAL

Cincinnati: Demand good; trend steady; supply fair; $155@158, delivered.

Portland: Demand slow; supply limited; imported $2.30, domestic $2.36.

Louisville: Demand good; trend steady; supply ample; $150 ton.

Indianapolis: Demand fair; trend unchanged; supply average; 65% $175 ton.

Los Angeles: Demand fair; trend steady; supply improved; $2.31 a unit of protein, either tuna meal or mackerel mixed with tuna.

San Francisco: Demand fair; supply ample; $2.25, imported $2.30 a unit of protein.

Ft. Worth: Demand good; supply sufficient; Angola 60% $138, 100-lb. bags, $136.50, 80-kilo bags, f.o.b. cars or trucks Houston, prompt shipment.

Minneapolis: Market steady to stronger; demand fair; 70% Canadian herring $2.25@2.30, U.S. funds, West Coast; 60% $139 ton, East Coast.

Chicago: Demand slow; supply fair; 60% protein $139, sacked, f.o.b. New England; 60% blended West Coast $130; herring meal 73% protein $2.35 a unit of protein, f.o.b. West Coast, sacked, subject to production.

Seattle: Demand steady; supply sufficient; imported herring meal $2.36 a unit, ex-dock; imported low protein meal $2.25, a unit, ex-dock.

Milwaukee: Demand and supply fair; $169.50.

Ogden: Supply normal; $2.20 a unit, f.o.b. Coast; 65% $163@165.

Atlanta: Demand fair; trend steady; supply ample; 60% imported $134@137, f.o.b. southern ports.

New Orleans: Demand fair; trend steady; supply ample; 60% imported $133.50@134.

Buffalo: Demand fair; trend steady; supply ample; $132.50@133.50, basis all East Coast points.

Boston: Demand fair; supply good; bulk $135.60.

Gorton's
COD LIVER & FEEDING OILS
MAXIMUM DOUBLE PROTECTION IN BOTH VITAMINS A & D

Warehouse Stocks Available for Immediate Delivery

CONTACT:
C. C. WELCH
435 Brevoort Road Columbus, Ohio
Phone: Ludlow 1077
PHILADELPHIA, PA.

CONTACT:
SEA BOARD SUPPLY CO.
35th & Grays Ferry Ave.
Philadelphia, Pa.
Phone: Fulton 9-2317

New England By-Products Corp.
177 Milk St. BOSTON 9, MASS.

HAY

Buffalo: Demand fair to slow; supply good; old, No. 1 $42@43, No. 2 $38@36, No. 3 $27.50@28.50; new, No. 2 timothy $29@22, No. 2 alfa fa mixture heavy $28@30; straw, good quality $14@15, all basis Erie County points.

New Orleans: Demand fair; trend steady; supply ample; timothy and clover $31@38, baled alfalfa $36@46, prairie $28@30.

New York: Demand good; trend unchanged; supply moderate; timothy, No. 1 $41@43, No. 2 $36@39, No. 3 $29@32.

Ogden: Supply average; $1.25 bale; $24@29 ton in the barn.

Seattle: Demand fair; supply good; baled alfalfa $40, delivered truck lots, western Washington common points for U.S. No. 2 green.

Boston: Demand quiet; supply ample; No. 2 timothy $35@37.

Los Angeles: Demand slow; trend weak; supply ample; baled alfalfa, U.S. No. 1 $41@42; U.S. No. 2 leafy $38@39.50; No. 2 green $38@39; U.S. No. 2 $35@37; No. 1 oat hay $44@46; No. 1 barley hay $36@38.

Louisville: Demand fair; trend steady; supply ample; timothy, clover or mixed timothy and clover $38@40; local alfalfa $40@42; western $60, straw $22.

Philadelphia: Demand and supply fair; timothy and clover $28@30.

Wichita: Demand good; supply scarce; prairie $25@35, alfalfa $40@50.

Ft. Worth: Demand good; supply limited; carlots, baled, No. 1 alfalfa $58@62, No. 2 $56@59, Oklahoma-Nebraska-Minnesota origin, prairie, No. 2 $48@50; Johnson grass, nominal, No. 2 $40, delivered TCP.

HOMINY FEED

Cincinnati: Demand poor; trend higher; supply somewhat limited; $65.

Louisville: Demand good; trend steady; supply ample; $63 ton.

Indianapolis: Demand slow; trend unchanged to higher on ground corn; supply light but ample; $65 ton, delivered Indianapolis, including state tags and used bags; ground corn $72 ton.

Kansas City: Fair demand; offerings fairly adequate with white quoted $60.50, sacked, Kansas City.

Chicago: Demand better; supply fair; $62.50 ton, sacked.

Memphis: Demand fair; trend lower; supply ample; white $63.75, yellow $66.

Milwaukee: Demand good; supply fair; $61.50.

Boston: Demand good; supply fair; $71.50.

Omaha: Demand fair; supply adequate; $52.50, bulk; $57.50, sacked.

Seattle: Demand good; supply sufficient; $72.50, delivered Seattle, carlots, paper bags.

Buffalo: Demand increased; trend upward; supply fair to tight; yellow $71.50@72.50, white $70.50@71.50, both Boston basis.

LINSEED OIL MEAL

Wichita: Demand slow; supply very short; 34% $106.

Cincinnati: Demand poor; trend steady; supply adequate; $93.50.

Philadelphia: Demand good; supply very scarce; no quotations.

Portland: Demand good; trend firm; supply scarce; $87.50, f.o.b. Los Angeles.

Louisville: Demand good; trend steady; supply fair; $98.

Indianapolis: Demand only fair; trend firm; supply ample; 43% $103 ton.

Los Angeles: Demand strong; trend firm; supply light; $85.25, sacked.

Kansas City: Market nominally at ceiling; no offerings.

Minneapolis: With offerings scarce and demand sufficient to absorb all current production, the market remained at the crusher ceiling level of $78, bulk, Minneapolis.

Milwaukee: Demand fair; none available; 34 to 36% $92.

Chicago: Linseed oil meal was extremely tight in the central states area this week, with virtually none available for nearby shipment. The upturn in demand was attributed to heavier cattle feeding. Quotation Nov. 19 for both 32 and 34% linseed oil meal, sacked, for January-March delivery, was $90.25 ton. This is the jobbers' ceiling price.

Boston: Demand quiet; supply scarce; 32% $94, nominal.

Ft. Worth: Demand fair; supply sufficient; carlots $86.50, bulk, f.o.b. Kenedy, Texas ($92.90, delivered Ft. Worth), November shipment; pellets $2.25 premium, plus seller's charge for sacking on date of shipment.

Omaha: Demand strong; supply very short; $90@95.

New Orleans: Demand fair; trend firm; supply tight; 32% or higher $101.25.

Seattle: Demand slack; supply tight; domestic production expeller meal $104, ex-dock, December; imported solvent meal $97, ex-dock, December arrival.

San Francisco: Demand and supply fair; $93.

MALT SPROUTS

Buffalo: Demand strong; trend steady to higher; supply scarce; domestic No. 1 $51@52, Boston basis; Canadian $72.50@73.50, basis New York or Philadelphia.

New Orleans: Demand good; trend steady; supply limited; $65@68.

Milwaukee: Demand good; supply scarce; $62, nominal quotation.

Chicago: Demand good; supply very tight; No. 1 nominally $65@67 ton, sacked.

Boston: Demand quiet; supply light; $69.

St. Louis: Demand very strong; supply limited; $51.50 bulk, $49@59.50 sacked; seller's ceiling price time of shipment, if higher.

MEAT SCRAPS

Buffalo: Demand fair to good; trend steady to upward; supply adequate; $106@107 ton, basis Buffalo.

St. Louis: Demand fair; supply adequate; 50% $106 bulk, $103 in paper bags, $105 in burlap bags.

New Orleans: Demand dull; trend steady; supply adequate; $107.50@110, local plants.

New York: Demand fair; trend steady; supply limited; 50% $97.50@98.50, 55% $103, sacked, 55% $102.50@105, bulk.

Milwaukee: No demand; supply good; 50% $105.

Chicago: Demand fair; supply adequate; 50% protein $105@110 ton, sacked; 55% $113.

St. Paul: Market steady to stronger; demand fair; supply ample; $100@110.

Seattle: Demand dull; supply good; $105 ton, sacked, f.o.b. producer's plant.

Ft. Worth: Demand good; supply sufficient; meat and bone, 50% $100@112, sacked, f.o.b. or delivered Ft. Worth.

San Francisco: Demand fair; supply good; $1.90 a unit of protein.

Boston: Demand light; supply good; $1.70 a protein unit; converted 50% $97.50.

Kansas City: Demand fair; market about steady; $108@110, sacked, Kansas City, for 50% meat and bone scraps.

Los Angeles: Demand light; trend weak; supply ample; $2 a unit of protein, bulk, representing a decline of 20¢ a unit during the past week.

Louisville: Demand good; trend steady; supply ample; $100@105 ton.

Portland: Demand slow; trend lower; supply ample; $2 a unit.

Cincinnati: Demand very good; trend strong; supply ample; 50% $105@107 ton, sacked, f.o.b. Cincinnati.

Wichita: Demand heavy; supply inadequate; 50% $120, f.o.b. plant; 55%, no quotations, no offerings.

Omaha: Demand slow; supply good; $110, bulk.

MILLET

St. Louis: Demand very good; supply extremely ught; recleaned, sacked, Early Fortune $5.25 cwt., St. Louis, nominal.

MILLFEED

Minneapolis: The flour midds. and red dog slipped further, but bran and standard midds. held fairly firm despite only moderate trading. Volume has been fairly heavy in bulk standard midds., selling about $4 ton less than sacked material. Quotations: bran $54.50@55.50, standard midds. $55.50@56.50, flour midds. $57.50@59, red dog $59@60.

Wichita: Demand good for bran, fair for shorts; supply insufficient; basis Kansas City: bran $55.50@55.75, shorts $61.25@61.50. Immediate delivery, with heaviest demand local. Prices were unchanged to 25¢ ton higher on bran, while shorts declined $1@1.25 ton, compared with the preceding week.

Omaha: Demand poor; supply ample; bran $55.75, shorts $62.

Ft. Worth: Demand active for bran and improved for shorts; supply sufficient; carlots, prompt, wheat bran $65, gray shorts $69.50@70.50, delivered TCP; about unchanged on bran but $1 lower on shorts compared with a week previous.

Chicago: Flour midds. and red dog were weaker in the central states area this week, but bran and standard midds. generally were holding near the status quo, although showing a wider range of asking levels. Demand was only fair for all types of millfeeds. Quotations Nov. 19: bran $57@60, standard midds. $60.50@61.50, flour midds. $61.25@64, red dog $61.25@64.

Milwaukee: Demand slow; supply ample; purs bran $60, standard midds. $61.

St. Louis: Demand flat; supply ample; bran $57.75@58.00, shorts $62@62.25, St. Louis switching limits.

Indianapolis: Demand fair to slower on gray shorts; trend weak to unchanged; no interest in supply; soft wheat winter bran $67, standard midds. $68, mixed feed $71, gray shorts $74 ton, sacked.

Louisville: Demand good; trend easier; supply ample; bran $64.40, mixed feed $67.50, middlings $70.50.

Cincinnati: Demand for bran poor, middlings fair; trend of bran steady, middlings steady to higher; supply adequate; bran $61.65@62.50, middlings $62@64.

Buffalo: Demand generally was improved over the previous week; supplies were down some because of smaller flour grind; Canadian millfeeds were moving into the New England market in fairly heavy volume; standard bran $57.50@58.25, standard midds. $57.25@58.50, flour midds. $61@62, red dog $64@64.75.

New York: Demand slow; supply adequate; trend unchanged; bran $65, standard midds. $65.

Philadelphia: Demand fairly good; supply ample; bran $65, standard midds. $65, red dog $72.50.

Boston: Demand light; supply adequate; bran $62.50, middlings $63.

New Orleans: Demand good; trend slightly easier; supply insufficient on bran and shorts; bran $64@65.50, shorts $70@70.50.

Memphis: Demand fair; trend lower; supply ample; wheat bran $62.25, gray shorts $65, standard midds. $66.

Seattle: Demand slow; supply excellent; $61, delivered common transit points.

Portland: Demand slow; trend lower; supply ample; mill run $59, middlings $65 ton.

Ogden: Supply normal; to Utah and Idaho dealers: red bran and mill run, blended, white $59, middlings $64; to Denver: red bran and mill run $66, middlings $71; to California: red bran and mill run $66.50, middlings $71.50, f.o.b. San Francisco and Los Angeles.

San Francisco: Demand fair; supply ample; $66; red bran $73.

Los Angeles: Demand steady; trend firm; supply ample; standard mill run $67, bran $73@74.

MINERAL FEED

Seattle: Demand steady; supply good; $54, ex-warehouse for high phosphorus mixtures, l.c.l.; $38 for competitive brands, ex-warehouse, l.c.l.

Omaha: Demand good; supply ample; $80, bulk; $90, blocks.

Ft. Worth: Demand good; supply ample; carlots, mineral supplement, 20% calcium, 4½% phosphorus $75@80; mineral blocks, 50-lb. each, 21% calcium, 4% phosphorus, 17½% salt, $85@90, f.o.b. Ft. Worth.

Portland: Demand good; supply ample; trend unchanged; $40@50.

Milwaukee: Demand good; supply adequate; $75; 50-lb. blocks $2.25.

St. Paul: All-purpose with iodine $92.50, mixer mineral $76, mineral blocks $97.50.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Indianapolis: Demand heavier; trend firm to unchanged; supply ample; mineral feed with iodine $51, in 5-ton lots $49, in 10-ton lots $48, f.o.b. Indianapolis.

Wichita: Demand heavy; supply inadequate; all-purpose with iodine, 50-lb. blocks $91.50; 100-lb. bags $85, f.o.b. plant.

MOLASSES

New Orleans: Demand fair; trend firmer; supply ample; 9½¢ gal. in tank cars, f.o.b. New Orleans.

Buffalo: Demand fair to slow; trend easier; supply ample; tanks, Buffalo $24@

COTTONSEED OIL MEAL FUTURES

Closing prices of cottonseed oil meal (41% protein) on the Memphis Merchants Exchange in dollars per ton (bulk):

	Nov. 14	Nov. 17	Nov. 18	Nov. 19	Nov. 20
December	....@*80.00	....@*80.00	....@*80.00	....@*79.00	....@*79.00
January	78.50@ 80.00	78.50@ 79.50	79.00@ 79.75	78.50@ 79.25	78.00@ 79.00
March	78.25@ 79.90	78.25@ 79.50	78.75@ 79.50	78.25@ 79.00	78.00@ 78.75
May	78.50@ 80.00	78.50@ 79.50	78.50@ 79.50	78.25@ 79.00	78.00@ 78.50
July	78.00@ 79.50	78.00@ 79.50	78.50@ 79.50	78.25@ 79.00	78.00@ 78.50
October	....@*74.00	....@*74.00	....@*74.00	....@*72.00	....@*70.00

*Bid.

SOYBEAN OIL MEAL FUTURES

Closing prices of soybean oil meal (basis Decatur, Ill.) on the Chicago Board of Trade and on the Memphis Merchants Exchange, in dollars per ton (bulk basis):

CHICAGO

	Nov. 14	Nov. 17	Nov. 18	Nov. 19	Nov. 20
December	....@ 76.75	....@ 77.40	76.80@ 76.90	76.25@ 76.50	75.00@ 75.20
January	78.30@ 78.75	78.75@ 79.00	78.40@ 78.50	78.50@ 78.75	76.60@ 76.90
March	79.80@ 80.00	80.25@ 80.75	....@ 80.25	79.80@ 79.90	....@ 78.25
May	80.75@ 80.80	81.25@ 81.50	81.00@ 81.25	80.75@ 81.00	79.00@ 79.50
July	80.75@ 81.10	81.50@ 81.75	81.30@ 81.50	80.90@ 81.00	79.00@ 79.75

MEMPHIS

	Nov. 14	Nov. 17	Nov. 18	Nov. 19	Nov. 20
December	76.00@ 76.75	....@ 76.50	76.00@ 76.50	75.50@ 76.25	....@ 74.00
January	77.50@ 78.00	78.00@ 78.25	....@ 78.00	77.50@ 78.00	75.75@ 76.25
March	78.75@ 79.00	78.85@ 79.50	....@ 79.00	....@ 78.50	76.50@ 77.25
May	80.20@ 81.00	80.50@ 81.25	80.50@ 80.75	....@ 80.00	....@ 78.50
July	80.20@ 81.25	....@ 81.00	80.85@ 81.15	....@ 80.40	78.50@ 79.25
August	80.50@ 82.00	80.75@ 82.00	80.75@ 81.50	80.25@ 81.00	78.25@ 79.25
October	72.00@ 75.00	72.00@ 74.50	72.00@ 74.25	72.00@ 74.00	70.00@ 72.00

MILLFEED FUTURES

The following is a comparison of settling prices at Kansas City for Nov. 13 and 20:

Bran—	Nov. 13	Nov. 20
November	$55.25@ 55.75	$54.80@ 55.00
December	....@*57.15	55.25@ 55.20
January	57.95@ 58.35	56.00@ 56.50
February	58.25@ 58.50	57.60@ 57.90
March	58.60@ 59.25	57.75@ 58.25
April	59.00@ 60.00	58.00@ 58.50
Shorts—		
November	$61.25@ 61.50	$....@*59.75
December	61.10@ 61.25	....@*59.75
January	61.00@ 61.30	60.10@ 60.40
February	62.50@ 62.75	61.25@ 61.90
March	63.00@ 64.25	62.10@ 63.25
April	64.00@ 65.00	62.75@ 63.75

*Sales.

Vitamin Oils by Gorton's®
Products of American Industry
SOLD BY MEN WHO UNDERSTAND YOUR NEEDS
NEW ENGLAND BY-PRODUCTS CORP. · 177 MILK STREET BOSTON, MASS.
Distributors For Gorton-Pew Fisheries Company, Ltd. By-Products Div.

24.25, Albany $18.95@20.10, Baltimore $17@17.25; 600-lb. drums, Buffalo $8.75@8.90, Albany $7.35@7.40, Baltimore $7@7.10.

New York: Demand fair; trend steady; supply ample; 10¢ gal.

Atlanta: Demand slow; supply light; citrus molasses $20, f.o.b Florida mills.

Seattle: Demand steady; supply good; $17 ton in tank car lots; $7, 600-lb. drum.

Ft. Worth: Demand fair; supply sufficient; blackstrap, prompt 10¢ gal., f.o.b. Houston; $26.81 ton, delivered Ft. Worth, November through March, seller's price date of shipment, maximum 12¢, f.o.b. Houston.

Milwaukee: Demand fair; supply ample; blackstrap 9½¢ gal., New Orleans.

Memphis: Demand easy; trend steady; supply adequate; blackstrap 9¢ gal., tank car, f.o.b. New Orleans.

Minneapolis: Market stronger; demand fair; supply ample; 9½@10¢ gal., f.o.b. New Orleans; $17 ton, West Coast.

San Francisco: Demand and supply good; $17 ton, f.o.b. cars, Richmond, Cal.

Boston: Demand fair; supply ample; tank cars 10½¢ gal.

Kansas City: The completion of sale of the Cuban supply of blackstrap to U.S. firms has strengthened the market, together with the shortage of tank cars; market firmed to 9½¢ mostly for immediate or December guaranteed against decline; 10¢ January-March guaranteed; 9½¢ immediate through March with no guarantee; all basis gal., New Orleans.

Los Angeles: Demand fair; trend steady; supply ample; $17 ton, f.o.b. tank cars, Los Angeles harbor.

Indianapolis: Demand fair; trend firm to unchanged; supply ample; 50-gal. drum $13.55, including drum; bulk, 50 gal. $10.55, ton $36, barrels extra.

Louisville: Demand fair; trend steady; supply ample; 9¢ gal., tank car lots, Gulf ports.

Cincinnati: Demand fair; trend steady; supply ample; 8¾¢ gal., f.o.b. New Orleans.

NIACIN

New York: $9 kilo.

OAT PRODUCTS

New Orleans: Demand fair to good; trend steady; supply adequate; pulverized white oats $71@80, pulverized oats $69, mixed feed oats $64.50, mill oats $63.

Boston: Demand slow; supply tight; white pulverized $64; reground oat feed $32.50@33.

Indianapolis: Demand fair to good; trend steady to higher; supply meager; pulverized oats $63, white pulverized oats $67, crimped oats $83, steel-cut oats $110, oat groats $110, fine ground oatmeal $95, rolled oats $105, recleaned No. 2 white oats $1.05 bu., racks extra.

Louisville: Demand fair; trend steady; supply normal; reground $36; fine ground feeding oatmeal $91; pulverized $66; rolled oats or groats $101.

Portland: Demand slow; trend higher; supply ample; rolled $83, ground $81, cleaned $83.

Chicago: Demand poor; supply ample; reground oat feed $28 ton, sacked; fine ground feeding rolled oatmeal $80@82; feeding rolled oats $90@92.

Memphis: Demand fair; trend steady; supply ample; 3½% protein, reground oat feed $37.

Milwaukee: Demand fair, good on molasses; supply fair scarce on molasses; pulverized, white $62, feed $60; molasses oat feed $45; regrounds, 3% $30@34, 5% $32.50@36.50.

Minneapolis: Demand is reported fairly good, with prices on some items off slightly. Quotations: poultry rolled oats $94, standard pulverized $59, reground oat feed $30, feeding oatmeal $55.

Philadelphia: Demand moderate; supply ample on pulverized, fair on Canadian oat feed, scarce on domestic oat feed; pulverized white oats $69.50; Canadian oat feed $25, domestic $36.50, nominal.

St. Louis: Demand fair on pulverized, good on oat feed; supply adequate; pulverized white oats $64, choice $65; reground oat feed $31 in 100-lb. burlaps.

Buffalo: Demand fair to good; trend steady to upward; supply adequate; reground oats $28@29, pulverized white oats $61.50@62.50, both Buffalo; pulverized mixed feed oats $62@63, mixers' pulverized white oats $63.50@69.50; Crescent pulverized white oats $68.50@69.50, all Boston basis.

OYSTER SHELL

New Orleans: Demand good; trend steady; supply ample; $11.50@12, local origin.

Seattle: Demand steady; supply good; eastern $27, western $24, both ex-warehouse, l.c.l.

Portland: Demand slow; supply ample; trend unchanged; western shell $27, eastern shell $33.50, granite grits $22, crystal grits $22.

San Francisco: Demand fair; supply ample; local $13, eastern $24.

Los Angeles: Demand fair; trend steady; supply ample; eastern $24; local $13@15.

Louisville: Demand good; trend steady; supply ample; $19.50 ton.

Boston: Demand and supply good; paper $21.44.

PEANUT OIL MEAL

Portland: Demand good; supply ample; trend unchanged; $102.

Milwaukee: Demand good; supply scarce; 26% $72, 45% $105.

Atlanta: Demand slow; supply tight; 45% $91, f.o.b. Georgia mills, nominal.

New Orleans: Demand slow; trend weaker; supply ample; $91@97, f.o.b. mills.

PEAT MOSS

New Orleans: Demand good; trend firm; supply adequate; 150-lb. bales German moss $3.25@3.50.

Chicago: Demand steady; supply adequate; $3.30, 100-lb. bale.

New York: Demand good; trend steady; supply fair; Canadian $3.20@3.50, imported $2.75@3.30, f.o.b. port.

Seattle: Demand slow; supply very good; $2.60 bale, ex-warehouse, either horticultural or litter.

Portland: Demand slow; supply ample; trend unchanged; $2.45.

San Francisco: Demand fair; supply ample; $3.15 bale.

Los Angeles: Demand fair; trend steady; supply ample; $3.25 bale.

Boston: Demand steady; supply adequate; carlots $2.75 bale; l.c.l. $2.85@3.

Philadelphia: Demand and supply light; $2.45, f.o.b. pier.

POTASSIUM IODIDE, U.S.P.

New York: Demand normal; trend steady; supply ample; 200-lb. lots $2.15, 100-lb. lots $2.17, 25-lb. lots $2.20; potassium iodide chalk mixture, 250-lb. lots $3.06, 100-lb. lots $2.08, 25-lb. lots $2.11.

St. Louis: Demand and supply good; 100% pure potassium iodide, U.S.P., 100-lb. lots $2.17 in fiber drums; 25-lb. lots $2.20 in fiber drums, 5-lb. lots $2.27 in bottles, f.o.b. St. Louis; 90% potassium iodide calcium stearate mixture, 225-lb. lots $2.06 in leverpak drums, 100-lb. lots $2.08 in fiber drums, 25-lb. drums $2.11, 5-lb. bottles $2.18, f.o.b. St. Louis.

RICE BY-PRODUCTS

New Orleans: Demand fair; trend strong; supply light; bran $45@46.50, Louisiana mills.

San Francisco: No offerings; no quotations.

Memphis: Demand good; trend higher; supply tight; bran $49.50, sacked, f.o.b. Arkansas points.

Ft. Worth: Demand improved; supply scarce; rice bran $1@52½, f.o.b. south Texas rice mills, November; 53@54¢, December through February shipment; hulls $6@7, f.o.b. mills.

Atlanta: Demand fair; trend strong; supply tight; bran $45@50, f.o.b. Louisiana mills.

RIBOFLAVIN

New York: Demand good; supply ample; trend unchanged; 12½¢ gm. equivalent, freight allowed.

Terre Haute: Demand and supply good; 12½¢ gm. of contained riboflavin, with freight allowed, for 8,000 and 16,000 potency dried fermentation solubles.

SCREENINGS

Minneapolis: Release of accumulated supplies of screenings broke the market sharply during the week, but subsequent cleaning up of lower-priced offerings brought about a partial recovery of Canadian screenings, which had traded as low as $26.50. Quotations: country run $32@40, lights $20@30, mediums $30@40, heavies $40@50; Canadian $30, bulk, Duluth; Canadian ground $41, sacked, Duluth; flax screenings $35.

Chicago: Demand ample; supply fair; ground grain screenings $43 ton, sacked; Canadian $32.70 ton, bulk.

Buffalo: Demand fair to slow; trend

Controlled
Uniform Quality
B&W
DEHYDRATED
ALFALFA MEAL
BERT & WETTA SALES INC.
MAIZE, KANSAS

EARL A. HOGAN CO.
BOARD OF TRADE BLDG. KANSAS CITY, MO.
Phone VICTOR 7729, 7730 and 8144
Members: Kansas City Board of Trade
Midwest Feed Manufacturers Association
Grain & Feed Dealers National Association

MARKET QUOTATIONS

Nov. 21, 1952

Both Bran and Shorts are weak. Offerings are not so plentiful but the demand is slow. No doubt there will be a sharp contraction in flour milling operations next week due to the holiday.

WE ARE OFFERING SUBJECT TO FURTHER CONFIRMATION NET US BASIS KANSAS CITY.

LOADED
Two Cars Each

Wheat Bran	$54.75	Grey Shorts	$59.75

Four Cars Each, Scattered, Prompt

Wheat Bran	BULK	50.50
Standard Midds	BULK	55.50
Grey Shorts	BULK	57.00

Four Cars Each Next Week and Week Following

Wheat Bran	SACKED	55.00
Grey Shorts	SACKED	60.00

Any Part of Eight Cars Each Week
December and January

Wheat Bran	SACKED	55.75
Standard Midds	SACKED	59.00
Grey Shorts	SACKED	60.00

February, March and April

Wheat Bran	SACKED	58.25
Standard Midds	SACKED	63.00
Grey Shorts	SACKED	63.50

FOR BULK BASIS ON DEFERRED MILLFEED DEDUCT $4.00 PER TON

Any Part of Five Cars, November and December

Ground Mixed Screenings (Sacked 100 lb. Burlaps about 8% Protein 30% Fibre) ..... $29.00 per ton

FOR YOUR CONVENIENCE WE ARE OPEN SIX DAYS A WEEK—MONDAY THROUGH SATURDAY. WIRE OR PHONE US ANYTIME.

FEED GRAINS
KAFIR-MILO
BARLEY - CORN - OATS - WHEAT
From Every Grain Producing Area in United States

CONTINENTAL GRAIN COMPANY

OFFICES:
New York, Chicago, Kansas City, St. Louis, Omaha, Columbus, Memphis, Nashville, Enid, Minneapolis, Fort Worth, Buffalo, Peoria, Galveston, Portland, San Francisco, Vancouver, B. C., Winnipeg, Los Angeles

TERMINAL ELEVATORS:
Kansas City, St. Louis, Chicago, Buffalo, Omaha, Toledo, Columbus, Fort Worth, Portland, Galveston, Enid, Minneapolis

steady; supply ample; domestic ground $62@63, Boston basis; Canadian screenings $35@36, unground type, 20-lb. or better $40@42, bulk; ground type $47.50@48.50, basis New York or Philadelphia territory.

New Orleans: Demand fair; trend steady; supply adequate; ground $60@60.50.

SESAME MEAL

Los Angeles: Demand light; trend steady; supply adequate; $105@106, sacked.

SORGHUMS

New Orleans: Demand quiet; trend steady; supply sufficient; $2.97@2.98.

Ft. Worth: Demand fair; supply sufficient; carlots, bulk, No. 2 yellow $3.25@3.30, delivered TCP.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Chicago: $22, carlots.
Kansas City: $21.50@22, carlots.
St. Louis: $21.10@21.50, carlots.
Des Moines: $22.25@22.50, carlots.
Philadelphia: $21.25@21.50, carlots.
Minneapolis: $23.75, carlots.

SOYBEAN OIL MEAL

Buffalo: Demand fair; trend easier; supply ample; 44%, immediate $74@75, November $75@76, December $76@77, January through March-April $79@80; 41% 50@75¢ higher than 44%.

New Orleans: Demand slow; trend weaker; supply adequate; 44% $98@100.

Atlanta: Demand slow; trend steady; supply adequate; 44% $80, bulk, f.o.b. Mississippi mills.

Seattle: Demand slow; supply ample; $109 ton, sacked, quick-November shipment.

Ogden: Supply average; $107@112.

Ft. Worth: Demand limited; supply ample; 41 and 44%, northern origin $98@99, November - December shipment; Missouri-Arkansas origin $96@97, November shipment, delivered Ft. Worth.

San Francisco: Demand fair; supply ample; $108.69.

Omaha: Demand firm; supply strong; $90@95.

Chicago: A little better demand existed for nearby soybean oil meal in the central states area this week, and a slight rise in prices, around $1.50 ton, was apparent. A scarcity of 41% meal existed, with virtually none offered for nearby. Only small amounts were available for January-March delivery. Next week 44% meal will be bringing around $86@89, and December $88.50@89. January-March shipments were bringing $91@92.50 ton and April-September about $2 higher. All quotations are sacked, basis Chicago.

Milwaukee: Demand only fair; supply ample; 41% $89, 44% $90.

Memphis: Demand poor; trend lower; supply ample; prime 41% protein, old process $83, sacked, f.o.b. Memphis.

Decatur: Demand and supply fair; 41% $75@76.50 ton, bulk; 44% $75@76.50.

Minneapolis: The market eased off again after a minor advance early in the week. Nearby was quoted at $73@74, bulk, Decatur; December $1 higher and January forward $77, same basis.

Kansas City: Demand less urgent this week with offerings about ample to meet present needs; feed mixers not anxious to book ahead and staying close to shore; even reluctant to book December needs now; spot market mostly $76.50@77.50, bulk, Decatur, for either restricted or unrestricted 44%.

Los Angeles: Demand steady; trend higher; supply ample; spot and transit $74@76, bulk, Decatur, equivalent $107.19@109.19, delivered, sacked; January through September $3@4 higher.

Indianapolis: Demand fair to good; trend firm to unchanged; supply ample; 41 to 44% $94 ton.

Louisville: Demand good; trend strong; reported at $96.60, carlots, sacked.

Portland: Demand slow; trend firm; supply ample; November $76, December $78, January $80.

Philadelphia: Demand fair; supply ample; $77.50, bulk, Decatur.

Wichita: Demand fair; supply sufficient; 41% $98, f.o.b. Wichita.

Boston: Demand good; supply light; $75.

Cincinnati: Demand very poor; trend higher; supply adequate; $77, bulk, Decatur.

SUNFLOWER SEED

St. Louis: Demand fair; supply nil; no quotations available until new crop.

SUNFLOWER SEED MEAL

Los Angeles: Demand fair; trend slightly weaker; supply adequate; $94@95, reground, sacked.

Portland: Demand good; supply ample; trend unchanged, $92, ex-dock, coarse grind; $102, fine grind.

TANKAGE

Louisville: Demand good; trend steady; supply fair; $100@105 ton.

Kansas City: Demand fair; offerings adequate; 60% digester $108@115, sacked, Kansas City.

Wichita: Demand heavy; supply inadequate; 60% $120, f.o.b. plant.

Ft. Worth: Demand good; supply scarce; 60% digester $110@115 ton, f.o.b. Ft. Worth.

New Orleans: Demand slow; trend steady; supply limited; 60% $122.50@127.50.

St. Louis: Demand fair; supply adequate; 60% $110 bulk, $113 in paper bags, $115 in burlap bags.

St. Paul: 60% digester $108@110.

Chicago: Demand fair; supply adequate; 60% protein $112.50@115, sacked.

Milwaukee: Demand good; supply fair; 60% $112.50.

Omaha: Demand and supply fair; $110, bulk.

WHEAT GERM

Chicago: Market stronger; demand fair; supply ample; $90.

Farm Program

(Continued from page 1)

the level of support would be regulated by supply. Under this theory the level of support would not only act as an insurance policy against disaster to the producer but it would become in effect an automatic brake in one instance and an accelerator in another to production of crops. This principle was incorporated into the farm law by the 80th Congress at the time the present senator from New Mexico, Clinton P. Anderson, was secretary of agriculture. Subsequently, when the Democrats regained control of Congress in the 81st, Sen. Anderson modified the action of the 80th Congress by delaying the application of the escalator principle. Sen. Anderson will probably remain as a Democratic member of the Senate agriculture committee and support more moderate price support theories.

In the past year Sen. Aiken has expressed concern over the growing criticism of the farm program by the urban press. In this concern it may be felt that the Vermont senator fears that a maintenance of a 90% support level for the basic commodities will provoke resentment against the farm program because high levels of farm price support may be charged with boosting the cost of living to the consumer in metropolitan areas.

The 90% support line for the basic agricultural commodities is particularly vulnerable to attack in one major respect. The price support principle is primarily geared to the 1909-1914 base period from which the parity concept is measured. In that five year span it was concluded by Congress that the purchasing power of the farmer as reflected by sales of his produce was in balance with the cost of goods he had to buy from the industrial segment of the nation. However, since that time there have been drastic changes in agricultural production methods which, as in the case of wheat and corn, have sharply reduced the cost of producing and harvesting these crops, thereby transforming 90% support level from an insurance to the producer into a guaranteed income for these crops when the producer makes use of the government loan programs.

In that respect the farm price support technique slowly becomes more accurately an income guarantee to the producer of these crops, weather permitting.

Going over to the House side of Congress one finds the real core of the high price support advocates. Here the two parties are woven into a closely knit fabric with little if any difference found between the Republican majority or the Democratic minority. The House agriculture committee is dominated by members from the major commodity producing areas with only scattering membership from the deficit agricultural communities. It would be political heresy and suicide if they were to abandon their adamant stand for a strong high price support level farm program for the basic commodities.

During the past years only once did Congress revolt against high price support when it killed the potato price support program after reducing the level of support for that crop from 90% to 60% of parity. Even the support-minded agriculture committee members in both chambers dared not continue a program for this crop which produced the scandalous disbursement of public money to buy up surplus production for destruction while at the same time good, merchantable potatoes were unobtainable in the urban markets.

But it is unthinkable that the House agriculture committee can be persuaded to drop the high price support line for the basic commodities.

The real tough nut to crack in the price support program is that of the non-basic or perishable commodities. Secretary of Agriculture Charles F. Brannan dusted off an old New Deal program, calling it the Brannan plan through which perishable agricultural commodities would be permitted to seek their price level in the market place and the producers would be compensated by the government for the difference between their selling price and some basic level which was never very clearly explained. The Brannan theory was essentially one of production payments to the producer of a crop. It had been previously used by earlier USDA regimes but the new look given this program by Secretary Brannan either obscured this fact or deadened memories.

LAWRENCE W. HOWARD DIES OF HEART ATTACK

JACKSONVILLE, FLA. — Lawrence W. Howard, 57, president of Howard Feed Mills, Inc., Jacksonville, died of a heart attack Nov. 15.

Mr. Howard, prominent in the grain and feed trade in the Southeast for a number of years, had returned home from the Florida State

Lawrence W. Howard

Feed Dealers Assn. convention and nutrition conference at Gainesville a few hours before he was stricken. He was a past president of the organization.

Mr. Howard founded the Howard Grain Co. which was purchased by General Mills, Inc., in 1929. He served as manager of the operation for 15 years under the Farm Service Division of General Mills. In 1944 he left the company to establish Howard Feed Mills.

Survivors include Mrs. Howard; a daughter, Jane; two sons, Lawrence, in military service, and James, a student at Dartmouth College, and a brother, George Howard, a grain and feed broker in Jacksonville.

ADA Convention

(Continued from page 1)

sort hotels have been engaged for the convention-goers, the Royal Palms, Jokake, Paradise and Casablanca Inns. All are located in a region at the foot of famous Camelback Mountain about 10 miles east of Phoenix, Ariz.

The first important business scheduled for the gathering will be a two-day meeting of the Alfalfa Research Council Jan. 11-12 at the Jokake Inn. The session will review progress reports on alfalfa research projects being carried on throughout the country and will consider new projects in accordance with the procedures adopted by the council at its meeting in St. Petersburg, Fla., last January.

Applications for grants-in-aid for funds to cover new research projects will be received in the office of the ADA secretary in Kansas City prior to Dec. 1, according to an agreement reached at St. Petersburg last year. That will give the council ample time to consider the projects before the 1953 meeting. Progress reports on current projects also will be in the secretary's hands by Dec. 1.

The board of directors of the ADA will meet at the convention headquarters hotel, the Paradise Inn, on Jan. 11.

The first annual Dehydrators Golf Tournament will be held Jan. 12 at the exclusive Phoenix Country Club. Arrangements for the event are under the direction of Louis A. Melczer, vice president, Arizona Flour Mills Co., Phoenix. Golf prizes will be awarded at a get-acquainted mixer on the evening of Jan. 12 at the Paradise Inn.

Business Sessions

Formal business sessions of the ADA convention will begin Jan. 13. An innovation at these meetings will be the use of visual aids in the presentation of reports on association activities. This first session also will consider the reports of the Research Council, adoption of new amendments to the trade rules and election of new directors.

J. D. Sykes, vice president, Ralston Purina Co., St. Louis, and chairman of the board, American Feed Manufacturers Assn., will be the first of a series of outstanding speakers to be in the convention program. He will discuss the future needs of the feed industry. The final speaker on the morning session Jan. 13 will be Dr. L. E. Card, head of the department of animal science, University of Illinois, Champaign. His talk is entitled, "New Horizons."

Clothes for western work and play will be modeled at a special "western style show" following the Tuesday noon luncheon. In addition to beach and play attire for ladies, a wardrobe of men's western clothing will be displayed. The first meeting of the new board of directors will take place on the afternoon of Jan. 13. The meeting will be open to all interested members.

A western barbecue is scheduled for the evening of Jan. 13 on Camelback Mountain.

Cattle Feeding Discussion

Because of the growing interest in use of dehydrated alfalfa meal in cattle rations, a portion of the morning session Jan. 14 will be devoted to a discussion of cattle feeding. Main speaker will be Harold Stevens, county agricultural agent of Dawson County, Lexington, Neb. His topic will be farmer relations. Mr. Stevens has been active for many years in farmer-dehydrator relations in Dawson County, the most concentrated dehydrated alfalfa area in the world. Other topics to be discussed Jan. 14 include sales and marketing.

The new president's luncheon will be held at noon Jan. 14 with all convention-goers invited.

The annual alfalfa smoker round-table will take place following the luncheon. Quality improvement will be the principal topic, and other items to be discussed will include agronomy, harvesting, processing, quality control, packaging, storage and handling.

The convention proper will conclude with the annual banquet in the evening Jan. 14. The newly reelected governor of Arizona, Howard Pyle, will deliver the banquet address.

Mr. Larson urges that reservations be sent immediately to his office at 1015 Dwight Bldg., Kansas City. A new feature which is being added this year for the benefit of the families of members is the "School in the Desert." The school may be attended by ADA children who attend the convention.

HEYDEN FIRM MARKETS ANTIBIOTIC SUPPLEMENTS

NEW YORK—An antibiotic feed supplement in concentrated form is being introduced by Heyden Chemical Corp., New York, under the trade name "Pro-Gro," Simon Askin, president, has announced.

The antibiotic concentrate consisting of 80% high potency crystalline procaine penicillin "G" and 20% diluent is being offered to the feed supplement trade with a choice of diluents tailored to meet individual requirements, according to Mr. Askin. Sale will be in bulk only.

Heyden Chemical Corp. produces penicillin, dihydro streptomycin, streptomycin and neomycin.

ANNOUNCING

New Clorofolen

AT LOWER COST

WITH GREATLY IMPROVED QUALITY

* Price reduced from 7 to 15 cents per pound July 15, 1952.

† 33⅓% added deodorant potency.

†† Fortification requirements dropped from 3.3 pounds per ton to 3 pounds per ton. Dry weight of prepared dog food.

INCREASED VOLUME

* (now over 100 dog food manufacturing customers) makes the above price reduction possible, although raw materials and labor have increased. This reduction is consistent with our early promise to customers that we would continually lower prices without sacrifice of quality or an ever expanding research program.

NEW KNOWLEDGE

† with regard to the deodorant factors in the Chlorophyll complex makes possible an improved product with an overage factor of safety. This "overage" is intended to minimize the extra calories consumed by many pets whose diets do not consist *solely of Clorofolen-fortified foods*—extra meat, table scraps, kindly neighbors and exposed garbage cans.

REDUCED POUNDAGE

†† We are now informing our customers that on all future shipments of Clorofolen the amount added could be reduced from 3.3 pounds to 3 pounds per ton dry weight of dog food. This results in an additional ten per cent reduction without lowering the overage factor required by the intake of extra calories from unfortified sources.

BOWMAN FEED PRODUCTS, Inc.

HOLLAND, MICHIGAN

Sales Offices:

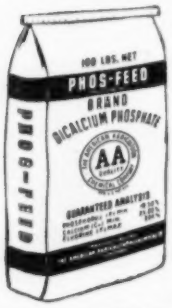
220 East 42nd Street, New York 17, N. Y.
600 S. Michigan Blvd., Chicago 5, Ill.
170 East California Street, Pasadena 1, Calif.
Canadian Chlorophyll Sales, 393 Weston Road, Toronto, Ont.

PHOS-FEED*

BRAND

Dicalcium Phosphate

MINERAL SUPPLEMENT FOR FEED MIXTURES



- One of the purest and most economical sources of phosphorus
- Blends well with other feed ingredients
- Stable—free flowing—stores well

Phos-Feed Dicalcium Phosphate is high in phosphorus—extremely low in fluorine—.004% (fluorine not more than 40 parts per million).

Every step in production is rigidly controlled—from the mining of the phosphate rock through the entire chemical process to the finished product. That's why so many of the largest producers of animal and poultry feed mixes insist upon it.

And users like A. A. C. service, too! Phos-Feed is backed by an 85-year-old leader in agricultural chemicals. Available in 100-lb. paper bags, or bulk. Samples on request.

*Reg. U. S. Pat. Off.

WRITE OR CALL CHEMICAL SALES DIVISION

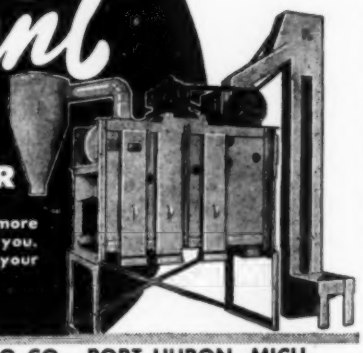
The AMERICAN AGRICULTURAL CHEMICAL Co.

50 Church Street, New York 7, N. Y., Telephone BArclay 7-1400

AA QUALITY — THE AMERICAN AGRICULTURAL CHEMICAL COMPANY

Bryant

STEEL-CUT CORN CUTTER



Extra profit — $5.00 or more per ton — is waiting for you. Why not get it by making your own steel-cut corn?

Write for details

BRYANT ENGINEERING CO. PORT HURON, MICH.

Farmers Co-op. Elev. Co. Albert City, Iowa

For Compact Units — Consult IBBERSON

You can profit by our 71 years' experience, whether you plan to build or remodel a Feed Mill, Elevator or Seed Plant.

Building an individual plant or a combination all in one compact unit offers no problem to IBBERSON. Write us in confidence.

T. E. IBBERSON COMPANY

Engineers and Contractors Minneapolis, Minn.

Minnesota 36% Linseed Meal

Manufacturers and dealers everywhere use Minnesota 36% meal or pellets. *Extra protein* sharpens appetites, boosts production. Wire, write or phone for latest quotes.

There's a QUALITY DIFFERENCE

MINNESOTA LINSEED OIL COMPANY

25—44th Ave. N. E. • Minneapolis 21, Minn.

Sterling 4893

BUFFALO LABOR DISPUTE REFERRED TO AFL HEADS

BUFFALO—The jurisdictional dispute between the American Federation of Grain Millers (AFL) and the Longshoremans Assn. (AFL) which recently threatened to tie up grain handling and milling operations in Buffalo has been referred to the top officials of the American Federation of Labor for settlement.

The dispute originally involved 15 jobs at the Harper Feed Mills, Inc., plant, which was installed in the premises formerly occupied by the Buffalo Flour Mills Corp.

The Longshoremen's union staged a brief wildcat strike to emphasize its claim to 15 jobs at the Harper plant and approximately 500 elevator workers were off their jobs for a short time.

Markets

(Continued from page 2)

the birds, and replacement buying is on the upswing. Hog feeds are said to be moving well.

Manufactured feed costs are holding about steady, with various changes in ingredient prices leaving the over-all price picture fairly static. Feed ingredient dealers still report hand-to-mouth buying on the part of manufacturers.

Pacific Northwest

Continued quietness was reported in the Pacific Northwest feed trade, particularly among country millers. Terminal millers reported that their business is holding up about as well as they normally can expect at this time of the year, but it is apparent that country millers are overbought and there are reports of deferment of shipping instructions and reselling of both carbohydrates and proteins in the country trade.

The broiler business gives promise of improving after the turn of the year. Turkey feeders have done quite well during the past season, which augurs well for the turkey feed business during 1953. At present, however, the slump seems to be continuing and neither traders nor feed millers expect an upturn before January.

The hay market remains steady at $40@41, the corn market is draggy at around $70.50 for November shipment, millfeed is very weak at $61, Seattle, and meat scrap is having a hard time holding its own at $2.10 a unit of protein. There is very little trading reported in either grains or proteins, but more severe weather could easily mean an increase in dairy and cattle feed business.

Northeast

Production of formula feeds in the Northeast this week held about in line with the previous week. Mills are scheduling operations as a general rule in line with the rate of orders received and are avoiding as much as possible any chance of having to place their output in storage even for as much as 24 to 48 hours.

Poultry feeds were the principal output of the mills, followed by dairy feeds. Another spell of unseasonably warm weather—something strictly out of the ordinary for these sections—made its appearance late in the week and set mill owners wondering what effect this change would have on feed sales.

Formula feed prices for the present are beginning to make a bottom and have hovered around these present levels for some few weeks. However, within the past week some of the important ingredients used in the formulas have stiffened their price trend and have begun to work back.

Another advance in milk prices paid to the producer was announced during the week, advancing the per quart price nearly 1¢, but up to the present it has not been passed on to the public. Dairymen report that the ratio now between the cost of production per gallon of milk and the price of formula feeds is at a satisfactory rate.

Southeast

Most feed mills report business was very draggy this week, with the volume quite disappointing. Many had laid in sizable inventories, anticipating strong demand by the middle of November. With weather extremely mild, cattle prices low and smaller numbers of hogs to feed, consumers have held their requirements below those experienced a year ago at this time.

Northern firms are dominating the poultry mash field, and the strength of broiler prices plus increased placements of chicks have not tended to

SEE
E. A. HOGAN CO.
PRICE CARD
Page 47

FISH MEAL HEADQUARTERS

SARDINE
•
HERRING
•
MENHADEN
•
BLENDED
•
South African PILCHARD
•
NORWEGIAN Full Herring
Includes Fish Solubles
•
NORWEGIAN HERRING
•
FISH SOLUBLES
•
FISH SOLUBLE Mixtures
•
Feeding Oils

Write - Wire - Phone for prices and deliveries

WILBUR-ELLIS COMPANY

320 CALIFORNIA STREET
SAN FRANCISCO 4

CHICAGO 3 - - Bankers Building
NEW YORK 6 - - 10 Rector Street
LOS ANGELES 15 - 1206 S. Maple Ave.
BUFFALO 3 - - Ellicott Sq. Bldg.
SEATTLE 4 - - Central Building

INDEX OF ADVERTISERS

Abbott Laboratories
Abilene Alfalfa Sales Co. 39a
Acme Traffic Service 46a
Active Display Adv. 12
Aeroglide Corporation 10
Albemarle Paper Mfg. Co. 60a
Albumina Supply Co.
Alfalfa Processors Laboratory 22a
Allied Mills, Inc.
Allison Manufacturing Co. 29a
Allis-Chalmers Mfg. Co.
Amburgo Co. 33
American Agricultural Chemical Co. 50
American Dehydrators Assn. 64a
American Elevator & Grain Division
American Mill Service Co., Inc.
American Processing Co.
American Scientific Lab., Inc. 16, 25
Anchor Grain Co.
Anderson Box Co. 38
Anderson, V. D., Co.
Anglo American Mill Sales Co., Inc.
Arcady Farms Milling Co. 15
Arco Dehydrating Co. 30a
Arid-Aire Mfg. Co. 43
Ark Valley Alfalfa Mills 6a
Armour & Co.
Arnold Dryer Co. 40a
Arweil, Inc.
Aubrey Feed Mills 33

Bacon, Edward R., Grain Co.
Bader, Inc. 40
Baker, H. J. & Bro.
Barker, Moore & Mein Co. 23
Barnard & Leas Mfg. Co., Inc. 53a
Bartels & Shores Chemical Co.
Bartlett, The C. O., & Snow Co.
Barton Mills, Inc. 6a
Bates Grain Co. 47
Battaglia-Frey, Inc.
Baughman Manufacturing Co., Inc.
Bauminger, J. H., Inc.
Baxter, A. E., Engineering Co.
Bayou Molasses Co.
Beedle-Whiton Co. 51a
Bemis Bro. Bag Co. 11a
Berg Bag Co.
Berg, Paul, P. E.
Bert & Wetta Sales, Inc. 21a, 47
Big Sky Dehy., Inc. 16a
Birdwood Products Co. 31a
Black, Sivalls & Bryson, Inc.
Blatchford Calf Meal Co. 25
Blomfield-Swanson Brokerage 31
Bonded Scale & Machine Co.
Bonewitz Chemicals, Inc.
Borden Company 41
Bosworth Commission Co.
Bowman Feed Products, Inc. 49
Bremco Alfalfa Mills, Inc. 22a
Brewers Yeast Council, Inc.
Britton, V. C., Co. 30a
Brower Manufacturing Co. 11
Bruce Peat Moss Corp. 37a
Bryant Engineering Co. 50
Burhop & Co. 16
Burlap Council, The
Burns, Loren V., & Associates
Burrows Equipment Co. 18
Butler Manufacturing Co.

Calcium Carbonate Co. 30
Calcium Products Co.
California Pellet Mill Co. 58a
Canadian Peat Moss Assn. 31
Caple, A. B., Co. 30a
Cargill, Inc. 43
CarO-Green, Inc. Back Cover
Central Alfalfa, Inc. 31a
Central Mills, Inc. 61a
Cerophyl Laboratories, Inc. 26a
Chantland Mfg. Co.
Chase Bag Co. 56a
Checkerboard Elevator Co.
Chemo Puro Mfg. Corp.
Clark, H. E., Co. 52a
Clinton Foods, Inc.
Cloffne, Herbert K. 16
Cochran, Wright W. 32
Colby Milling, Inc. 20
Cold Spring Granite Co.
Columbia Phosphate Co. 20a
Columbia Quarry Co. 37
Columbian Steel Tank Co.
Combs & Co.
Commercial Solvents Corp. 13
Consolidated Packaging Machinery Corp.
Continental Grain Co. 47
Cook, Leo, Co. 15
Corn Products Refining Co. 25
Crete Mills 40

D. C. A., Inc. 27a
d-Con Co., Inc.
Dannen Mills, Inc. 34
Davis, H. C., Sons' Mill Mach. Co. 43
Dawe's Laboratories, Inc. 31
Dawe's Products Co., The 9
Dawson County Feed Prod., Inc. 53a
Day Co., The
Dayton Bag & Burlap Co., The
Dehydrating Process Co. 35
Delta Phosphate Co.
Des Moines Oat Products Co. 34
Devold, Peder, Oil Co. 6
Diamond Crystal Salt
Diamond V Mills, Inc.
Distillation Products Industries 32
Distillers Feed Research Council, Inc.
Dixie Mills Co. 3
Dixon Dryer Co. 48a
Doty Technical Laboratories 53a
Doughboy Industries, Inc. 11
Dow Chemical Co.
Drew, E. F., & Co., Inc.
Dreyer Commission Co. 29
Duplex Mill & Mfg. Co. 37
Du Pont de Nemours & Co.

Early & Daniel Co. 10
Electrical Wholesalers, Inc.
Elk Valley Alfalfa Mills, Inc. 60a
Empire Sales Training Center
Erie Alfalfa Mills, Inc. 6a
Ewing, Ray, Co.
Exact Weight Scale Co.
Excelsior Milling Co.

Fairfield Engineering Co. 20a
Farmers Friend Mineral Co. 28
Faust, Henry K. 38
Fischbein, Dave, Co.
Flambeau Milling Co.
Flavor Corporation of America
Food Research Laboratories, Inc.
Forster Mfg. Co. 35
Fox Co. 37
Frey, Harry F., & Co.
Fruchey Service Co. 35
Fruen Milling Co. 7
Fulton Bag & Cotton Mills

Gainer Mills, Inc.
General American Transportation Corp. 43a
General Distributing Co., Inc. 38
General Mills, Inc.
Gerber, Chas. A., Co. 14
Gerber, J. J., Sheet Metal Works, Inc.
Godshalk Sheet Metal Fabricators 43
Goodrich Feed Mills
Gorton-Pew Fisheries 46
Gray-O'Keefe 40
Great Lakes By-Products Co.
Greshik, Joe 46a
Gruendler Crusher & Pulverizer Co. 45a

Hales & Hunter Co. 12
Half Moon Mfg. & Trading Co., Inc.
Hall Sales Co. 28
Hallenbeck Inspection & Testing Lab.
Hallet & Carey Co.
Hammond Bag & Paper Co. 32a
Hand, Peter, Foundation 40
Hardy, H. E., & Co.
Hart-Carter Co.
Harvest Brand Mineral Co.
Haugen Dehydrating Co. 27a
Hawkins Pig Palace Co.
Haves & Stolz Manufacturing Co.
Haymaker Feeds Co. 28a
Hayward, Inc. 25a
Heck, Edward J., & Sons Co. 28a
Herring Sales Co. 34a
Hess, Dr., & Clark, Inc. 22
Hess Mfg. Co.
Heyman Co., The
Heywood & Rabb, Inc. 22
Hiawatha Grain Co. 20
Highway Equipment Co., Inc. 42a
Hilltop Farm Feed Co.
Hilltop Laboratories 34
Hogan, Earl A., Co. 6, 47, 50
Holt Products Co.
Honeggers' & Co. 11
Howes, S., Co., Inc. 51a
Hubbard Milling Co.
Hubbell, Charles H.
Hudson Pulp & Paper Corp. 37a

Ibberson, T. E., Co. 50
Indiana Grain Machinery Corp. 42
Industrial Laboratories Co. 43a
Industrial Molasses Corp.
International Minerals & Chem. Corp.
International Paper Co., Bagpak Div.
International Salt Co. 10
Iowa Limestone Co.

J. & M. Trading Corp. 40
Jacobson Machine Works 57a
Jensen Sales Co.
Jersco Co. 21
Jones Alfalfa Milling Co. 12a
Jones Electric Machinery Co. 24a
Joseph, I. S., Co., Inc. 43

Kasco Mills, Inc.
Katz, Max, Bag Co., Inc. 59a
Kaw Dehydrating Co. 46a
Kellogg Co., The 40
Kellogg, Spencer, & Sons, Inc. 30
Kent, Percy, Bag Co., Inc. 7a
Keystone Steel & Wire Co.
Kipp Kelly, Ltd.
Kraft Bag Corp.
Kraft Foods Co.

La Budde Feed & Grain Co. 43
Laboratory Construction Co.
Landby Dehydrating Co. 29a
Land O'Lakes Creameries, Inc.
Larvacide Products, Inc.
Lederle Laboratories Div. 26, 27
Le Gear, Dr., Medicine Co.
Leon Associates
Liggett, Harry M., Co. 40a
Limestone Products Corp. of America 35
Lindfors Chemical Co. 12
Loncala Phosphate Co.

McClelland, M. A. 34
McGehee Company 63a
McLaughlin-Ward & Co.
McMillen Feed Mills 23
Magnuson, V. A., Sales Co. 45
Mallinckrodt Chemical Works
Malow Cordage & Twine Co.
Maney Bros. Mill & Elev. Co. 4, 21
Mann, The Howard, Co. 21a
Markley Laboratories
Martenis, C. J., Grain Co.
Martin, Theo. W., & Son
Maxim Oil & Emulsion Corp.
Mayo Shell Corp.
Mellody Mills
Menhaden Fish Meal Co.
Mente & Co., Inc. 48a
Merck & Co., Inc. 20
Merrithew, Bill, Co. 14
Mid-Continent Grain Co. 22
Midland Warehouse Corp. 21
Midwest Burlap & Bag Co. 29a
Midwest Dried Milk Co. 33
Mid-West Laboratories Co., Inc.
Mill Service Co.
Miller Manufacturing Co.
Minneapolis Sewing Machine Co. 37a
Minnesota Linseed Oil Co. 50
Minnesota Mining & Mfg. Co.
Mitchell, Hutchins & Co. 30
Mitchell Milling Co. 39
Monsanto Chemical Co.
Morrison & Quirk 44a
Morris-McAdams Co.
Morton Salt Co.
Mullin & Dillon Co.
Murch, D. H., Co.
Murphy Products Co.
Myers-Sherman Co. 49a

Nagel, Herman, Co. 24
Natl. Alfalfa Dehydrating & Mig. Co. 9a
National Cotton Council of America
National Cottonseed Products Assn.
National Distillers Products Corp.
National Food Co.
National Molasses Co.
National Vitamin Products Co.
Near's Food Co., Inc. 28
Nebraska Alfalfa Farms, Inc. 34a
Nebraska Boiler & Supply Co., The 41a
Nebraska Farm Products, Ltd. 12a
Neff & Fry Co.
Nellis Feed Co. 28
Neumond Co. 47a
New Amsterdam Import Co., Inc. 39a
New Century Co., The 22
New England By-Products Corp. 46
Newsome Commission Co. 34a
New York Quinine & Chem. Wks., Inc.
Nigh, W. H., & Co.
Noel, G. W., & Co. 43a
Nootbaar, H. V., & Co. 48a
Nopco Chemical Co. 19, 21
North East Feed Mill Co.
Norwood Manufacturing Co.
Nutrena Mills, Inc. 43

Oyster Shell Products Corp. 24

Pabst Brewing Co.
Pacific Molasses Co., Ltd. 14
Paper-Calmenson & Co. 55a
Park, Philip R., Inc.
Parks, J. P., Co. 4
Parrish, N. K. 31
Parrish & Heimbecker
Pay-U Laboratories, Inc.
Pay Way Feed Mills, Inc.
Peterson, Pete, Alfalfa Co. 7a
Pfizer, Chas., & Co., Inc.
Piehl's Alfalfa Mill 23a
Pillsbury Mills, Inc.
Pioneer Bag Co. 47a
Pittsburgh Plate Glass Co.
Platte Valley Sales Service 39a
Prater Pulverizer Co.
Pratt, W. C., Co. 7
Premier Peat Moss Corp. 37
Provico Feeds 16
Publicker Industries, Inc. 44

Quaker Oats Co.

Ralston Purina Co.
Rapid Read Rule Co.
Rapids Machinery Co.
Red River Alfalfa Co. 59a
Red Star Dairy Supply Co.
Reliance Feed Co.
Revher Milling Co., The 39a
Richardson, James, & Sons, Ltd.
Richardson Scale Co. 14
Richee-Nelson, Inc. 40
Richmond Mfg. Co.
Riley Feed Co. 22
Rural Dehydrators 22a
Ryde & Co.

Salsbury's, Dr., Laboratories 17
St. Joseph, The, Testing Lab., Inc. 44a
San Joaquin Valley Hay Growers Assn. 55a
Sargent & Co.
Savage, Inc. 15
Scanlan, Ivan, & Co. 60a
Schenley Distillers, Inc. 36
Schmitt & Kern, Inc.
Schutte Pulverizer Co.
Scroggins Grain Co. 30
Sea Board Sales Co. 34
Sea Board Supply Co.
Security Mills, Inc. 12
Sedberry, J. B., Inc. 6
Seedburo Equipment Co. 29
Selders, Eugene L., Co. 44a
Shahan-Smith Co., Inc.
Shanzer Manufacturing Co.
Shea Chemical Corp. 60
Shellbuilder Co. 16, 42
Shuford, J. C., Co. 44a
Sievert, C. W., and Associates
Silmo Chemical Corp. 15
Simmonds & Simmonds, Inc. 32
Sinason-Teicher
Sioux Alfalfa Meal Co. 52a
small, The W. J., Co. 3a, 8
Smith, Edward E., & Co. 20
Smith, J. Paul, Co.
Snyder Equipment Co. 46a
Southern Oyster Shell Mfg. Corp. 12
Southwell Grain Corporation
Southwest Mill Supply Co.
Specialde, Inc.
Spencer Kellogg & Sons, Inc. 30
Sprout-Waldron & Co., Inc. 13, 39, 45
Stabilized Vitamins, Inc. 25
Staley Milling Co.
Standard Brands, Inc. 37
Standard Molasses Co.
Sterwin Chemicals Inc. 4
Stivers, Theo. 24
Stone, Bob, Cordage Co. 29
Stone Mountain Grit Co. 12
Strong-Scott Mfg. Co.
Sunset Feed & Grain Co., Inc. 12
Superior Feed Co. 16
Superior Phosphate Co. 34
Superlife Yeast Co.
Swanson, Carroll, Sales Co. 43
Sweetall Manufacturing Co.

Tate & Roe, Inc.
Tennessee Eastman Co. 29
Textile Bag Manufacturers Assn.
Thompson-Hayward Chemical Co. 13
Thompson, The Tommy, Co. 30
Transit Grain Co. 16

Ubiko Milling Co. 18
Ultra-Life Laboratories, Inc.
Union Bag & Paper Corp.
Union Service Co.
United Distributing Co.
United Mineral Products Co.
U. S. Alfalfa Products Co. 35a, 59a
U. S. Industrial Chemicals, Inc.
Universal Grain Corporation
Universal Mills, Inc.

Van Dusen Harrington Co. 20
Van Waters & Rogers, Inc.
Victor Chemical Works
Vineland Poultry Laboratories
Virginia-Carolina Chemical Corp. 60a
Vitality Mills
Vy Lactos Laboratories, Inc.

W-W Grinder Corporation 31
Wallace & Tiernan Co., Inc.
Walsh Grain Co. 37
Ward Feed Co. 60a
Warren-Douglas Chemical Co., Inc.
Warren Feed & Grain Co.
Waterloo Mills Co.
Wene Poultry Laboratories
Wenger Mixer Co. 24
Western Soybean Mills 7
White, Bob, & Co. 50a
White, Martha, Mills, Inc. 10
White Laboratories, Inc. 20
Whitmoyer Laboratories 34
Wilbur-Ellis Co. 50
Wilson & Co.
Wilson, R. S., Co.
Wisconsin Alumni Research Foundation
Wittig Feed & Grain Co., Inc.
Woods, John J., & Sons 13a
Woodward & Dickerson, Inc. 11
Wyandotte Chemicals Corp.

Zellers' Laboratories 39

show much increase in formula feed volume for the southern manufacturer.

There are some indications toward heavier pen feeding of cattle, with feeders having more faith in potential profits based on current low beef prices. Some cattle raisers are now inclined to gamble on the market advancing by the time that fattened animals are ready for the market. This has caused some increase in animals on feed and gives some encouragement to the outlook for cattle supplement and straight protein sales.

In general, barely five days a week production is being maintained at the mills. Feed dealers say that their trade just isn't coming in for more than week-to-week supplies. Some feel that the new administration will not support commodities at old levels and are holding off until the last minute for necessary stocks.

This slow period is having little effect upon prices of southern oil meals. Cottonseed oil meal is holding to a steady plane of $2@3 under ceilings. Mississippi Valley soybean oil processors have enough orders on their books to hold their meal prices higher than the going market basis Decatur.

To meet the needs of dairymen hampered by drouth-reduced pastures, a few shipments of dried citrus pulp from Florida are beginning to trickle in. Southern ports will soon be loaded with dried beet pulp imported from Europe. This will supply ample carbohydrates, but prices are so high that this feed is being slowly accepted by the trade.

In spite of the drouth it will take some cold weather to greatly stimulate the lagging feed demand in the Southeast.

MY FIRST ANNIVERSARY

-- and I'm Just Getting Started!

It's my first anniversary with CarO-Green,
And in such a short time what progress I've seen!
Yet that path of progress extends for miles —
It's forever a challenge I'll meet with smiles.

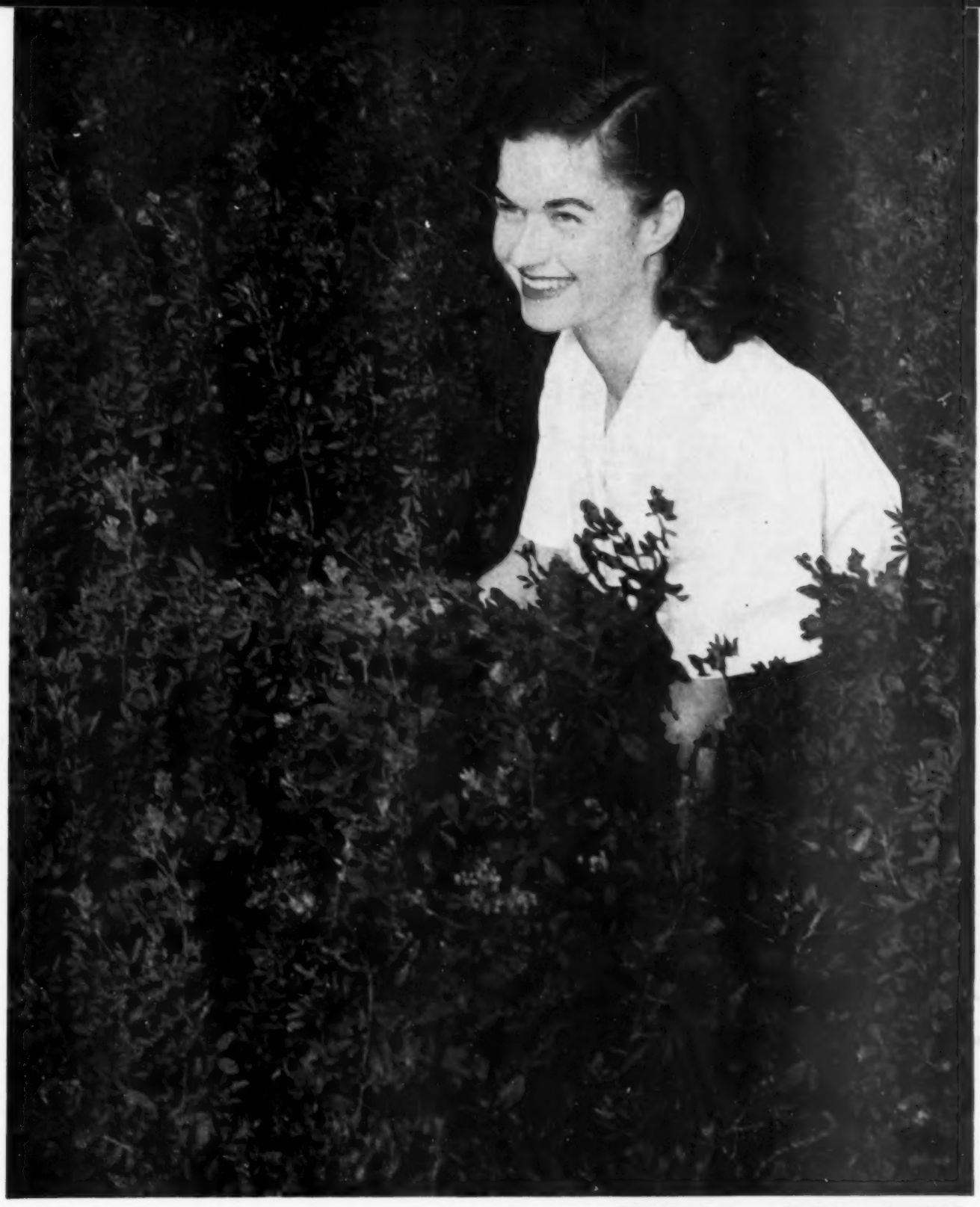
I've increased my plants — more help I employ —
To bring you a product you are sure to enjoy.
Improving techniques — controlling the blend —
T'was a back breaking job, but I didn't bend.

Now watch me go in the season to come.
The gears in my head just started to hum
With surprises ahead, like out of a dream
Coming true, through research by ***CarO-Green***!

— MISTER ALFALFA

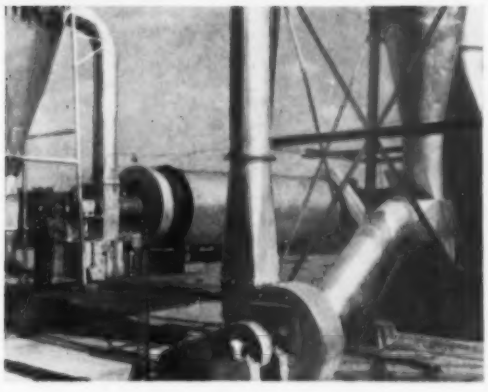
CARO-GREEN Inc.

BOARD OF TRADE BUILDING
KANSAS CITY, MO.



FEEDSTUFFS
In Two Sections — Section Two
November 22, 1952

ALFALFA SECTION

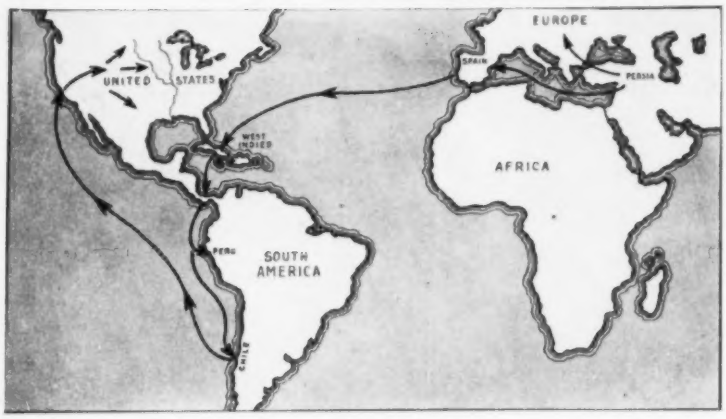


ALFALFA HAS LONG HISTORY

ALFALFA traveled nearly half around the world and took from 500 B.C. to about 1869 to become well-established in the United States. Alfalfa was first mentioned as having been grown in Media (Iran) where it gets a part of its botanical name, Medicago sativa. It lingered long in the Mediterranean countries of Egypt, Greece, Italy and Spain—from where it detoured into other areas not so well adapted, such as Switzerland, France and Germany. In Europe alfalfa became known as lucerne, a name still used in a few areas of the United States.

Alfalfa traveled slowly in its early history because its main mode of introduction was by conquesting armies. The Persians gave it the name "aspect" which means "horse fodder." It may be said the armies traveled on it. The Romans used it extensively. Columella, a Roman agriculture writer who lived in the first century of the Christian era, said: "The best is herba Medica (alfalfa), because where it is once sown it lasts ten years; because it can be mowed regularly four times a year, sometimes six times; because it fertilizes the land." The Moors and the Arabs knew alfalfa as "alfacfacah" which means "best fodder."

The Spanish conquistadores brought alfalfa to Mexico from where its culture spread to Peru and Chile. Many years later, gold seekers who sailed around Cape Horn in the early 1850's found alfalfa in Chile and brought it to California with them. From there it spread eastward across the continent. In the United States alfalfa found conditions more suitable for rapid development than any other land through which it traveled for 20 centuries.



ALFALFA took the path marked by these arrows half way around the globe to become established in the U.S.

TODAY—Alfalfa is grown on 15 million acres all over the U.S. It is a major farm crop for pastures and soil building as well as dehydration. So highly developed is the industry in some areas that it forms the commodity basis of small cities. The most famous alfalfa town is Cozad, Neb., in the rich Platte River Valley pictured above. Nearly all of the 2,500 citizens of Cozad live directly or indirectly from alfalfa. Seventy-five thousand acres of alfalfa land surround this Nebraska town and 54 alfalfa dehydrating drums are located in the county. Each October Cozad marks this fact with a civic celebration called "Hay Days." Elsewhere throughout America, from California east to Pennsylvania, alfalfa is important, too. And the alfalfa dehydrator and farmer work closely together with many a fence post chat like that pictured above.

Good things
come in
packages
Protein
Riboflavin
Small
Carotene (Pro-Vitamin A)
Alpha-Tocopherol (Vitamin E)
Choline
Pantothenic Acid
Vitamin K (Phthiocol)
Folic Acid (Including Folic Acid Conjugates)
Niacin (Nicotinic Acid; P-P factor)
Anti-Gizzard Erosion Factor
Xanthophylls
Vitamin C
Biotin
Experienced buyers are aware that Small's Dehydrated Alfalfa Meal is packed with "plus values." For, in addition to the protein and carotene content, Small's Dehydrated Alfalfa Meal contains a host of important nutritive elements that promote growth and health in poultry, swine and cattle. No other natural feedstuff contains so many important nutritive factors as dehydrated alfalfa meal; no other brand has earned the confidence of so many leading feed manufacturers as Small's Dehydrated Alfalfa Meal.
FOR FEEDS WITH A FUTURE
Small's

THE W. J. SMALL COMPANY
DIVISION
Archer-Daniels-Midland Company

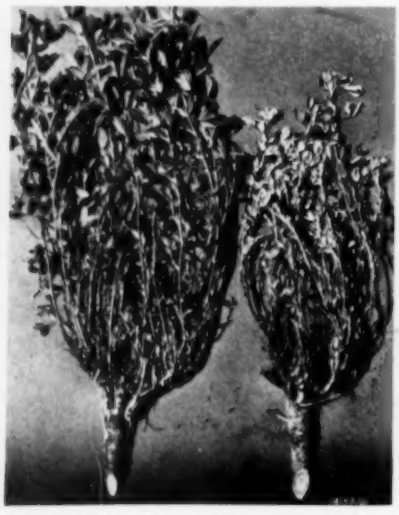
1200 OAK STREET KANSAS CITY, MISSOURI

THOUSANDS of alfalfa acres are irrigated. These water pipes are on wheels for easy movement over the field. Two men can handle a large area.

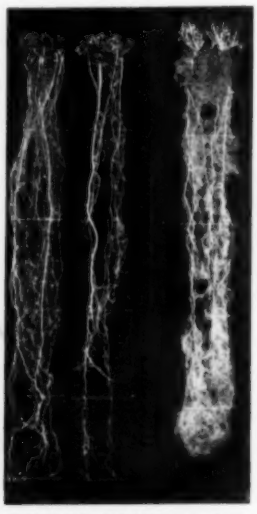
MANY INSECTS PLAGUE the alfalfa grower. They are controlled by dusting or spraying fields like this with the newest insecticides.

Growers Must Combat Drouth, Disease, Bugs

ALTHOUGH alfalfa is a hardy plant, the grower faces plenty of hazards. A perennial, some stands of alfalfa have persisted for many years, but as a practical matter three or four years is the limit for production of this crop for dehydrating purposes. Drouth and other things may make reseeding necessary sooner. Besides these hazards of the climate, plant diseases and harmful insects cause considerable loss every year. The most effective means of combatting all these problems is the development of resistant varieties through plant breeding. In some cases (such as the disease of bacterial wilt) it is the only method of meeting the problem. Ranger and Buffalo alfalfas, developed by the U.S. Department of Agriculture in cooperation with the Nebraska and Kansas agricultural experiment stations, are highly resistant to wilt, and although the seed is more expensive than common varieties, more is being sown each year in the areas where the disease is serious. Similar efforts are underway to develop better types of alfalfa for all areas and climates through cooperative work among scientists all over the country. It is believed that improvements accomplished thus far in the breeding of alfalfa are only the beginning.



THE EFFECT of bacterial wilt on alfalfa is shown in the plant on the right compared with the healthy growth at the left. Bacterial wilt caused a big drop in alfalfa acreage in the '20s. Plant scientists have now found resistant varieties. The disease is caused by an organism.



ALFALFA ROOTS go deep. On the left is normal root development. On the right is root development with sub-irrigation, where the water-table is five feet below the surface.

MANY INSECTS ATTACK alfalfa plants. Shown in this picture is an example of how pea aphids destroy alfalfa vitality; they retard growth and sometimes they destroy the first cutting when the outbreak is heavy. Other pests attacking alfalfa plants include leafhoppers in eastern states, lygus in the West, spittlebug, weevil, webworm, blister beetles and others.

HONEY BEES are responsible for more than 90% of all alfalfa pollination. Bees, in feeding on nectar, trip the alfalfa stamen, as this bee is doing.

WITHOUT POLLINATION, seed production is impossible. Beekeepers cooperate with alfalfa growers by furnishing hives on a rental basis.

HIVES IN A FIELD on a California ranch. California is the largest seed producing state. The U.S. needs about 100 million pounds of alfalfa seed a year, but only 2% or 3% of the highest quality seed is required for acreage to be dehydrated.

SCIENTISTS are searching constantly for acceptable new varieties of alfalfa which are resistant to insects and diseases. These plots at a Madison, Wis., are being used for test of Lygus bug control. Most alfalfa fields still are seeded with Common types but newer varieties like Buffalo and Ranger are increasing steadily.

THE MOST SERIOUS losses in alfalfa come from bacterial wilt. Many strains of Turkistan alfalfa (from what is thought to be the original home of the plant) are resistant to this disease and are used by plant breeders to develop resistant varieties adaptable to the U.S. Turkistan is shown at the right above and Kansas Common on the left.

ERIE BRAND ALFALFA MEAL

•

DEHYDRATED and SUNCURED

QUALITY · UNIFORMITY

Available thru the Winter Months

•

ERIE ALFALFA MILLS, INC.
ERIE, MICHIGAN
Phone 97

ALFALFA IS SOIL BUILDER

AS A PLANT, alfalfa is one of the legume family, which besides being of special value for feed and food, is regarded as superior for soil improvement. This is due to the nitrogen it supplies to the soil for subsequent crops. Much of the nitrogen contained in a legume is taken from air. This is accomplished through bacteria that develop in nodules on the roots. The bacteria take nitrogen directly from the air as they grow and this nitrogen in turn becomes available to the legume. To take the greatest advantage of this possibility, it is common practice to inoculate alfalfa seed with a culture of these bacteria just before seeding, as this alfalfa grower is doing.

NEW STYLE alfalfa seeder pulverizes soil and plants seed at best level about ½ in. below surface. Notched wheels leave small indentations in soil to prevent water run-off.

BARTON'S

DEHYDRATED ALFALFA MEAL

QUALITY • UNIFORMITY • SERVICE
THE YEAR AROUND

member American Dehydrators Association

BARTON MILLS, INC.
P. O. BOX 347 SO. OMAHA STATION
OMAHA, NEBRASKA
TELEPHONE: MARKET 5333

ARK VALLEY ALFALFA MEAL

Your "byword" for courteous, quick, dependable service!

- Uniform dehydrated alfalfa meal.
- Guaranteed Vitamin A and protein content.
- Especially produced for fine formula feeds.

WRITE · WIRE · PHONE
For Immediate Reply

The **ARK VALLEY**
ALFALFA MILLS, INC.
HUTCHINSON, KANSAS
MEMBER: NATIONAL HAY ASSOCIATION
GRAIN & FEED DEALERS NATIONAL ASS'N

DEHYDRATED ALFALFA QUALITY BEGINS IN THE FIELD

● By Dr. C. O. Granfield

Agronomist, Kansas State College, Manhattan, Kansas

C. O. Granfield

Do you know that alfalfa is the best commonly grown hay crop because of its feeding quality? Why? Because it is high in protein and minerals and is an excellent source of vitamin A. The average feed return per acre is high as compared to some other hay crops such as clover, timothy and clover hay or corn silage.

Alfalfa is no longer just a hay crop where quality is associated entirely with color and purity. It now involves the quantity and quality of the many elements in the plant now known to be useful in commercial products as well as in feeds.

Alfalfa is a multiple purpose crop in that it and its ingredients have many uses. New uses are continually being found, thus making it important that the variety and environment be favorable for the production of the ingredient desired.

It is common knowledge that many of the factors controlling the quantity of the nutritional ingredients of alfalfa are inheritable; therefore, they are found more abundant in some plants than in others, illustrating the fact that it is important to grow the variety that will produce the highest proportion of the part of the plant which may be high in that particular element.

The variety has not been produced that is superior in the production of all the different elements desired, but alfalfas have been produced that are superior in yielding ability in their adopted area and have resistance to certain diseases that if present will cause the loss in quality by destroying the leaves in the early stages of maturity.

Management Is Important

Management of the growing crop will influence quality. Young alfalfa is higher in vitamin A potency than alfalfa in the bloom stage, probably due to the loss of leaves as the crop matures. The carotin content of the leaves themselves is continually being built up until the plant reaches the bloom stage and the older leaves contain more carotin than the younger leaves, which emphasizes the fact that the loss of total carotinoid content of the plant, as the crop matures, is probably due to the loss of leaves. Therefore, if cut at the proper time, quality may be assured by having a high vitamin A content.

The practice of most commercial processors of alfalfa is to cut the crop in the bud stage. This assures them of a high quality product, because of the high percentage of leaves. However, from the producer's standpoint, if this practice is continued throughout the season, the plants will be weakened and more subject to diseases and winter killing, thereby reducing the stand.

The processor must be assured of a steady flow of material to the plant throughout the season for efficient operation, making it necessary to start cutting some fields earlier in the season than recommended for field maintenance. This can be partially compensated for later in the season by allowing later cuttings to go to late stages of growth. The grower must decide the purpose for which he is growing alfalfa and use the cutting practice that will produce quality in the product desired.

Analyze Soil

Alfalfa is generally known as a soil builder, but it is also a heavy user of certain plant foods in the soil, making it necessary to grow alfalfa on a soil that is not deficient in these elements. If grown on such soils, low quality alfalfa will be produced unless corrections are made by the addition of fertilizers. Intelligent additions cannot be made until a soil analysis has been made. Deficiencies in certain elements can often be detected by the behavior of the plant and type of growth. These symptoms are well known and recognized by alfalfa growers in moderate to extreme cases and can be corrected. When the shortage is slight or in case of the minor elements, quality may be affected without detection, thus making it important to know the soil and what fertilizer element is necessary for correction and the production of quality products.

PERCY KENT BAG CO., INC.
KANSAS CITY BUFFALO NEW YORK
Established 1885

● ● Alfalfa DEHYDRATED AND SUCCULENT

FEED MIXER
RETAILER
BROKER
FEED MIXER
Pete
FEED MIXER
JOBBER
EXPORTER
DEHYDRATOR

Pete
PETERSON ALFALFA COMPANY ● ●
SALES SERVICE SPECIALISTS
GRAIN EXCHANGE BLDG., OMAHA 2, NEBRASKA
Telephone ATlantic 7018 • Teletypewriter OM 157

SILHOUETTED against a fleecy spring sky, an alfalfa dehydrator looks over a field contracted with one of his growers. Many dehydrators own acreage and contract with farmers for additional alfalfa, either on a lease basis or field-by-field purchase of standing alfalfa.

Growers and Dehydrators Work Together

• By Harold M. Stevens, Dawson County (Neb.) Agricultural Agent

Nebraska leads all states in alfalfa production. Dawson County, in the center of fertile Platte Valley, has half of Nebraska's dehydrators, a total of 54 dehydrating drums. Dawson County is the most concentrated area of alfalfa production in the world, with 80% of the alfalfa products exported from the county.

Harold M. Stevens

In the spring of 1950, several dehydrator managers invited me to a meeting to discuss some of the alfalfa problems in the county and ways to solve them. The group decided to invite farmers to an alfalfa barbecue to discuss, with personnel from the Nebraska College of Agriculture, problems of soil fertility and the use of dehydrated alfalfa in cattle rations. Four hundred fifty farmers attended the barbecue which I supervised.

Next year dehydrators from the Lexington and Cozad area decided that the farmers should be better informed on bacterial wilt and alfalfa varieties. A field tour was arranged. Dr. W. B. Allington, plant pathologist, John Weihing, extension plant pathologist and Dr. M. D. Weldon, soils specialist of the University of Nebraska, were present to answer questions. In the Lexington area the dehydrator operators served another barbecue and the Cozad group served a steak dinner to all farmers who attended.

In December 1951, managers of seven of the dehydrating companies met with the county agent to discuss plans for 1952. This time the group sponsored a two-day excursion to the state agricultural college in Lincoln. Each dehydrator invited farmer customers and made a $20 deposit to cover the expenses of each farmer guest.

Ninety-seven farmers left in three chartered buses Feb. 25, with a stop for coffee in Grand Island and lunch at the agricultural college in Lincoln.

Dr. Ephriam Hixon, of the entomology department, told them of the newest developments in hopper and insect control methods and procedures. Dr. Hugo Grauman, in charge of alfalfa research, told the group that alfalfa breeding research being carried on at the university is directed to finding and developing varieties which have a high yield capacity, which produce forage of top quality and are disease resistant. He also described the experimental work on the development of creeping varieties which can be used in grass pastures. Dr. William B. Allington, and John Weihing of the plant pathology department, told of the research in plant diseases affecting alfalfa, such as "damping off" and bacterial wilt.

Evening entertainment included a dinner, followed by a college basketball game.

The following morning the group visited the agronomy farm where a beef catfle feeding project, the swine research center and the tractor testing laboratory were discussed. The farmers returned to Dawson County with new ideas. They were so enthusiastic about the trip that plans are now in the making for another group tour in 1953.

The latest county-wide project with which the alfalfa dehydrators in Dawson County cooperated was in construction of a new 4-H building, at the Dawson County Fair Grounds. Every dehydrator in Dawson County contributed to a total $1,360.

DEHYDRATORS of Dawson County, Nebraska, sponsored this field tour. Here a group of farmers inspects a field of thin alfalfa damaged by bacterial wilt. The tour was in charge of agronomists from the University of Nebraska.

DAWSON COUNTY dehydrators serve barbecued beef to some 450 alfalfa growers, following one of the meetings devoted to discussions of better alfalfa production methods. Cooperation with growers is vital to the dehydrator.

ALFALFA MEAL

—and fragrant fields

While travelling the hot highways in summer most everyone has experienced a pleasant thrill when passing a blossom-tipped field of growing alfalfa.

One is entranced by alfalfa's natural green beauty and gently soothed by its cool and delightful fragrance.

From such sources comes the alfalfa for manufacturing National's dehydrated, field-fresh products. Even in the bag, in mid-winter, there's still a pleasing hint of summer fields.

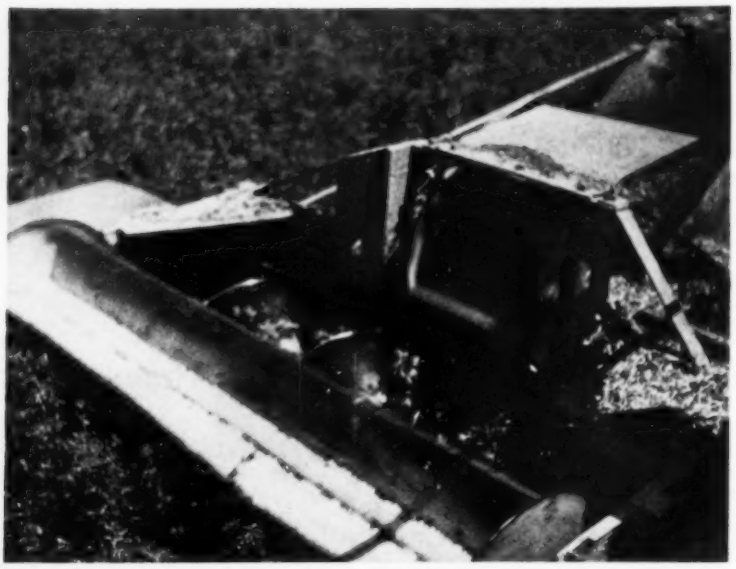
NATIONAL ALFALFA DEHYDRATING & MILLING CO.
LAMAR, COLORADO
Merchants Exchange
ST. LOUIS, MISSOURI

field-fresh and wholesome

CUTTING TIME!

Alfalfa Dehydrators Have Big Investment in Harvesting Machinery to Get Alfalfa From Plant to Sack in Average of ¾ to 1½ Hours

FIELD OPERATIONS often are conducted over great distances. Many dehydrators have two-way radio communications with their field equipment and trucks.



THE SICKLE cuts through an alfalfa stand while the screw conveyor carries it quickly to the chopper. The alfalfa never touches ground.

WHAT MAKES ALFALFA QUALITY IN HARVESTING?

By John C. Kephart

Director of Research, National Alfalfa Dehydrating & Milling Co.

ALFALFA is unique in that it is one of the few agricultural crops that is harvested for dehydration during its most vigorous growing period.

In spite of the many improvements in processing methods, processing equipment, etc., the stage of maturity at which alfalfa is harvested has more direct bearing on the quality of dehydrated alfalfa meals than any single factor or combination of factors.

John C. Kephart

It is known that approximately 90% of the vitamins, 60 to 70% of the proteinaceous materials, along with a goodly portion of the minerals reside in the leafy portion of the alfalfa plant. It is also known that the stem-leaf ratio of the plant is constantly increasing throughout its growing period. In addition, it is known that the protein content of the alfalfa leaf is constantly decreasing throughout the life of the plant.

In Colorado ten varieties of alfalfa have been studied and without exception, the protein content of the leaf has decreased and the percentage of stem has increased during the growing period of the plant. Experimental results from three of the varieties studied are shown below:

The Protein Content of the Alfalfa Leaf and the Percentage of Leaf of the Alfalfa Plant

Variety	Sampling Date	Height of Stand	Percent Leaf	Percent Protein in Leaf
Mecker				
Baltic	5/4	8"-11"	53.5	39.6
	5/18	13"-17"	45.0	37.1
	5/25	17"-15"	39.6	34.2
	6/7	21"-25"	34.1	29.5
Ladak	5/4	8"-10"	52.0	36.05
	5/18	10"-12"	47.0	34.95
	5/25	12"-16"	46.5	32.60
	6/7	20"-25"	31.9	27.05
Buffalo	5/4	7"-10"	53.0	36.6
	5/18	8"-12"	51.0	35.20
	5/25	13"-16"	49.0	29.35
	6/7	21"-25"	36.7	26.15

From the above it will be determined that in the production of high quality dehydrated alfalfa meals, the producer has several uncontrollable factors confronting him. To produce a dehydrated alfalfa meal of the highest quality, it would be necessary for the dehydrator to harvest his alfalfa at the earliest possible stage of growth. However, such procedure of frequent and immature harvesting of alfalfa results in a shorter life span of the alfalfa stand. Therefore, the alfalfa dehydrator must effect a compromise between the quality of his product and the longevity of the alfalfa stand.

Trial and error methods have shown that if alfalfa is harvested between the one tenth and one half bloomstage a product of reasonable quality may be obtained without seriously threatening the longevity of the stand. In some instances, it is impossible to harvest all the alfalfa in a given locality at a definite stage of growth.

If then, some of the alfalfa is harvested at a late stage of growth its quality must be improved by removal of excess stem by screening.

While the stage of maturity is a primary factor in determining the quality of dehydrated alfalfa meals, considering that the alfalfa has been harvested at the proper stage of growth, subsequent field operations also have a direct bearing on the quality of the finished product. For example, on occasion it had been the practice to wilt or partially dry the alfalfa in the field. Such procedure obviously increased the production capacity of the dehydrating equipment but it also markedly decreased the quality of the final product. The effect of field drying on the carotene content of alfalfa leaves is shown below.

The Effect of Field Drying on the Carotene Content of Alfalfa Leaves

Time Sampled	Temp. °F	Moisture percent	Carotene Micrograms/ Lb.
8:15 a.m.	74	78.6	282,000
11:15 a.m.	94	72.7	229,000
2:15 p.m.	87	48.5	216,000
4:00 p.m.	77	44.4	182,000

Loss of Carotene in Alfalfa Leaves When Dried in the Field Overnight

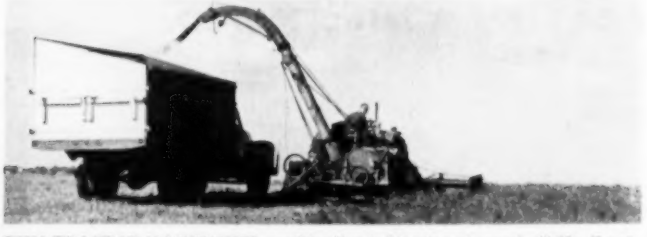
Time Sampled	Moisture %	Carotene Micrograms/Lb.
7:40 p.m.	78.5	286,000
7:40 a.m.	79.5*	208,000

*The increase in moisture content was attributed to a heavy dew which occurred during the night.

From the foregoing tables it is not difficult to determine that the partial

ONE TYPE of harvesting combination. Right to left are tractor, harvester and chopper, power loader which blows alfalfa into "live-bottom" trailer which in turn discharges into truck.

ANOTHER HARVESTER combination. This is a single unit and is self-propelled. It tows a trailer here.

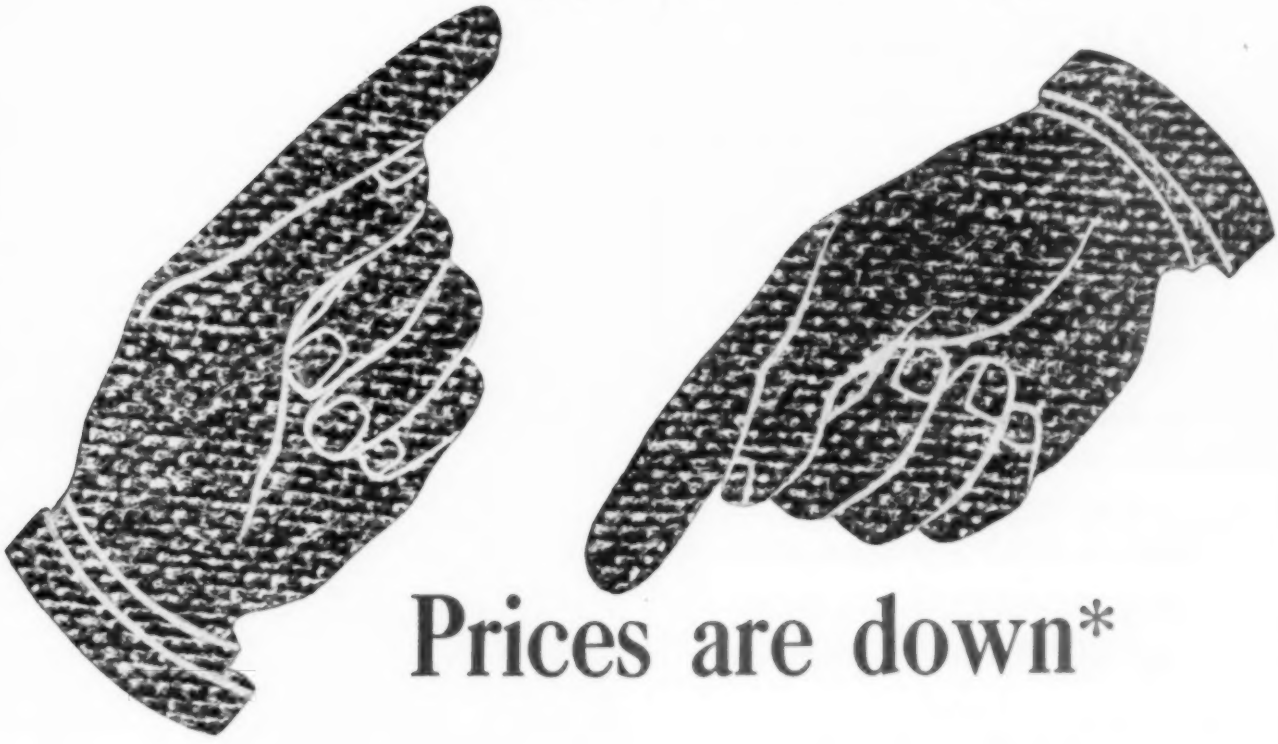


THIS TRACTOR-HARVESTER combination is blowing chopped alfalfa directly to the truck which trails it down the field.

ANOTHER NEW development makes a self-propelled unit by combining the harvester with a customary tractor.

Here's a big reason why
BEMIS BURLAP BAGS are important
in your packaging operation . . .

Supplies are up



Prices are down*

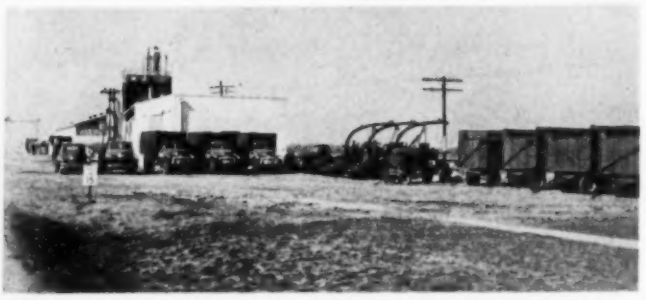
*P. S.—Big jute crops in India and Pakistan, and continued heavy production, promise a long continuation of this happy situation. Get the up-to-the-minute Burlap Story from your Bemis Man.

Bemis

BEMIS BRO BAG COMPANY

General Offices—St. Louis 2, Mo.
Sales Offices in Principal Cities

FOR REPAIRING field breakdowns, dehydrators have trucks specially equipped for such emergencies.



DEHYDRATORS have large sums invested in harvesting equipment. Here is a typical double-unit plant with six trucks, three self-propelled harvesters, four trailers and a gasoline transport. Total investment in this equipment would represent about $50,000. Another $50,000 approximately would be needed for plant equipment and buildings.

drying of alfalfa in the field tends to defeat the very purpose of dehydration.

To determine the effect of various processing procedures on the carotene content of alfalfa, we have followed the operations from the growing plant to the dehydrator with results as shown below.

The Effect of Various Handling Procedures on the Carotene Content of Alfalfa Leaves*

Type Sample	Moisture Content	Carotene Micrograms/Lb
Fresh growing	72.95	187,000
2 hrs. in windrow	70.41	161,000
Alfalfa chopped in field	70.95	150,500
Alfalfa chopped in field taken at dehydrator**	69.32	121,200

*The samples were all from the same field, the only variation being in the methods of handling.

**Sample taken at the dehydrator immediately before it was fed into the drum. Elapsed time between cutting and drying being approximately 2.5 hours.

From the above table it is determined that the chopping of alfalfa leaves definitely has a destructive effect on carotene. This is believed due to increased enzyme activity. It also demonstrates that as high as 35% of the carotene may be destroyed between the time of cutting and drying of the alfalfa.

To overcome some of these carotene losses due to the methods of processing alfalfa over the past several years many changes and improvements have been made in methods and equipment. Some of these are as follows:

1. The adaption of new type field equipment which eliminates the possibility of drying the alfalfa in the field before dehydration.
2. The adaption of new type equipment which also shortens the elapsed time between harvesting and drying.
3. The installation of automatic equipment for feeding of the alfalfa into the dehydrator, resulting in a more uniform product.
4. The redesigning of dehydrating furnaces which allows more rapid drying of the alfalfa, thus shortening the time between the harvesting and drying of the alfalfa enzymic action.

To reduce further the losses of carotene and other factors from alfalfa which occur during processing, research aimed at preserving carotene between the time of cutting and dehydration is being conducted. To date some degree of success is indicated. It is hoped, however, that such preservation methods may be carried through to the finished product.

MANY DEHYDRATORS run field equipment and trucks on liquefied petroleum gases like propane. Here is a propane tank mounted on a tractor. Savings of 25% in engine wear and maintenance are obtained. Propane gives fewer miles per gallon than gasoline but about 3@5¢ less per gallon in the middlewest. A truck can be converted for about $150 and a tractor for $75.

THE END of the road. A dump truck drops its cargo of chopped alfalfa, untouched by hand or ground, into the feeder at the dehydrating plant.

JONES *Premium*

TOP QUALITY DEHYDRATED ALFALFA MEAL

From the rich alfalfa lands of the Kaw Valley in Kansas

PRODUCED UNDER STRICT LABORATORY CONTROL

JONES ALFALFA MILLING CO.
622 Van Buren - Topeka, Kansas
Phone: Topeka 2-0509

FOR HIGHEST QUALITY
DEHYDRATED ALFALFA MEAL
ON YEAR-ROUND BASIS FROM
CALIFORNIA and NEBRASKA
Contact

NEBRASKA FARM PRODUCTS
LIMITED
COZAD, NEBRASKA

Phone Cozad 6
Teletype Cozad, Neb., 892

EMERALD BRAND

DEHYDRATED ALFALFA MEAL

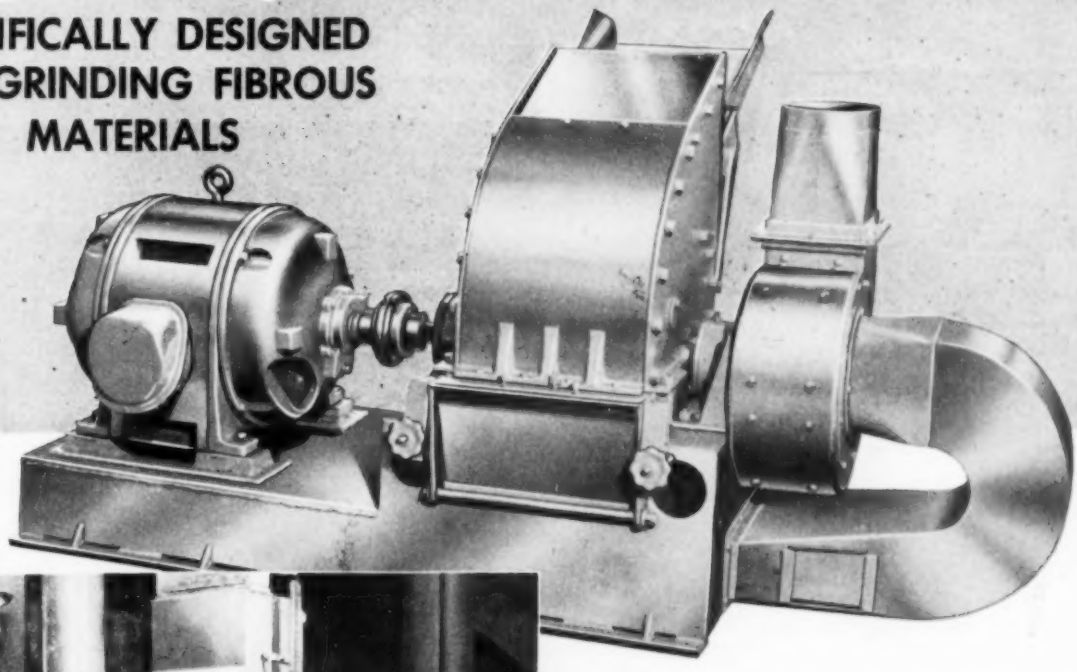
Members:
American Dehydrators Association
Grain & Feed Dealers National Association

ADA American Dehydrators Association

from years of research . . .

a new DIXIE® ALFALFA PULVERIZER

SPECIFICALLY DESIGNED FOR GRINDING FIBROUS MATERIALS



When installation requirements call for abnormally high lifts of pulverized materials, use the Dixie Alfalfa Pulverizer with a separate fan drive, as illustrated above.

BUILT IN 25"— 20"— 17"— 14" WIDTHS FROM 60 TO 250 HORSEPOWER

1. Higher Hammer Tip Speed Gives Greater Production
2. Heavier Rotor and Thicker Rotor Discs
3. Heat-Treated Hammer Support Rods
4. Extra Heavy Bearings Stand Up Longer Under Continuous Operation at High Speeds
5. Designed by America's Foremost Mill Designer—Walter J. Clement

MAXIMUM practical hammer tip speed and rugged construction make the New Dixie *the* answer to production and cost problems facing today's alfalfa processors. The Dixie Mill operates at 3600 rpm, and is built to give tremendous production on a round-the-clock basis, with a minimum of down time. Greater hammer impact, with increased screen area, and correct control of air combine to give a better grind of fiber encountered in sun-cured or dehydrated alfalfa.

Write today, and let us show you how to handle a larger volume at lower cost than you'd think possible . . . and get a grind more acceptable to brokers who sell the product — and, particularly to mixers who use alfalfa meal. Models are available from 60 to 250 H.P., for direct connection or V-Belt drive. If you are using 3600 rpm motors on low-capacity equipment, our factory may be able to use your present motors to drive a new Dixie.

CALL, WIRE or MAIL
This Coupon for Further Details!

John J. Woods & Sons
Dept. AF-1
7221 Troost Ave.
Kansas City 10, Missouri

Please send me information on the new Dixie Alfalfa Pulverizer.

Name_____

Position_____

Company_____

Address_____

City_____ State_____

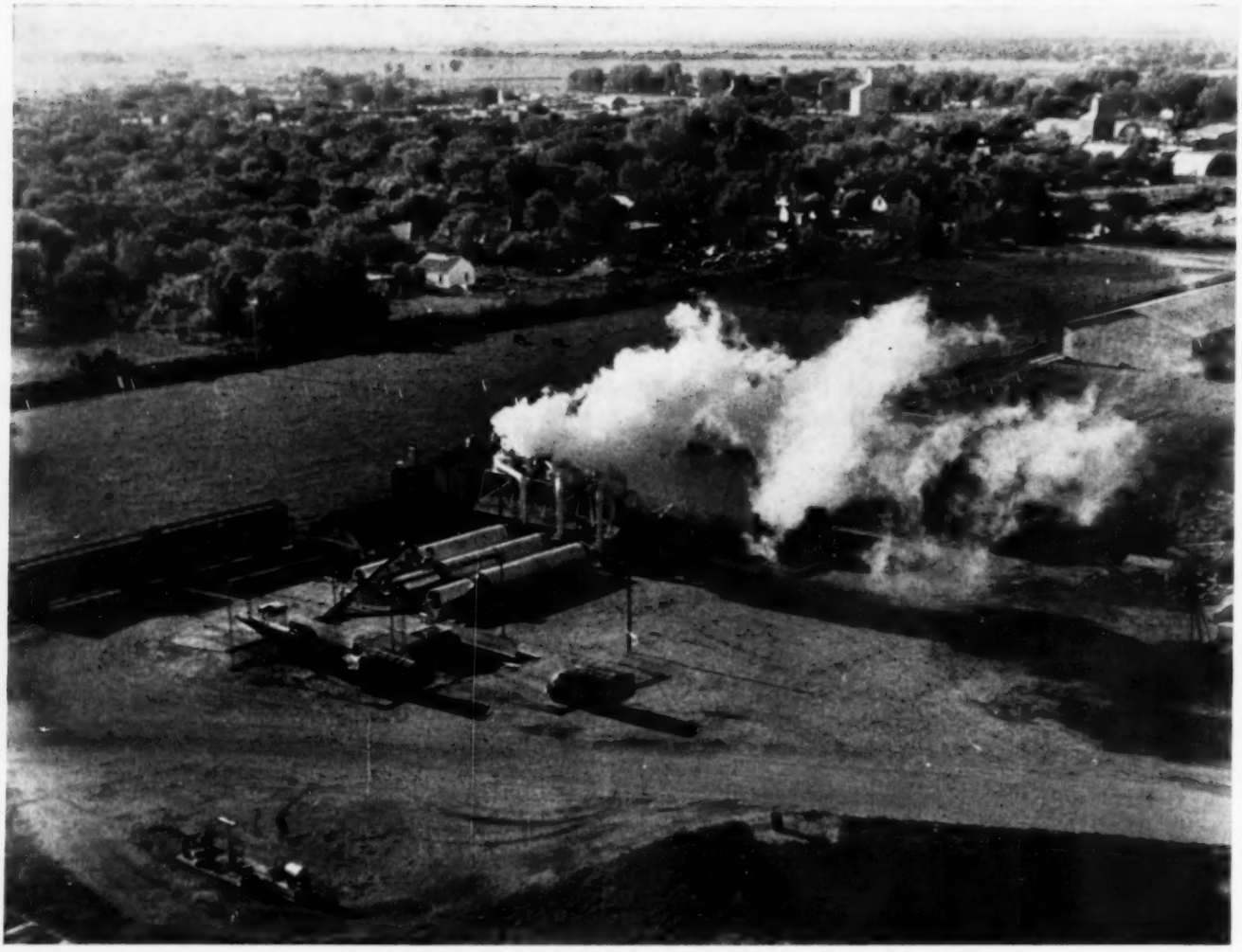
JOHN J. WOODS & SONS

GENERAL SALES OFFICE
7221 TROOST
KANSAS CITY 10, MO.

National Distributors

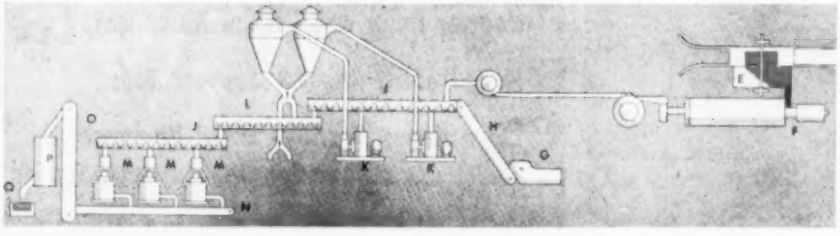
FACTORY SALES OFFICE
4200 GOODFELLOW BLVD.
ST. LOUIS 20, MO.

MANUFACTURED BY
DIXIE MACHINERY MANUFACTURING COMPANY
DIVISION OF BATH IRON WORKS CORPORATION



AT THE EDGE of many a peaceful little town the dehydrating plant offers a busy industrial contrast throughout the summer.

DEHYDRATING IS A COMPLEX BUSINESS

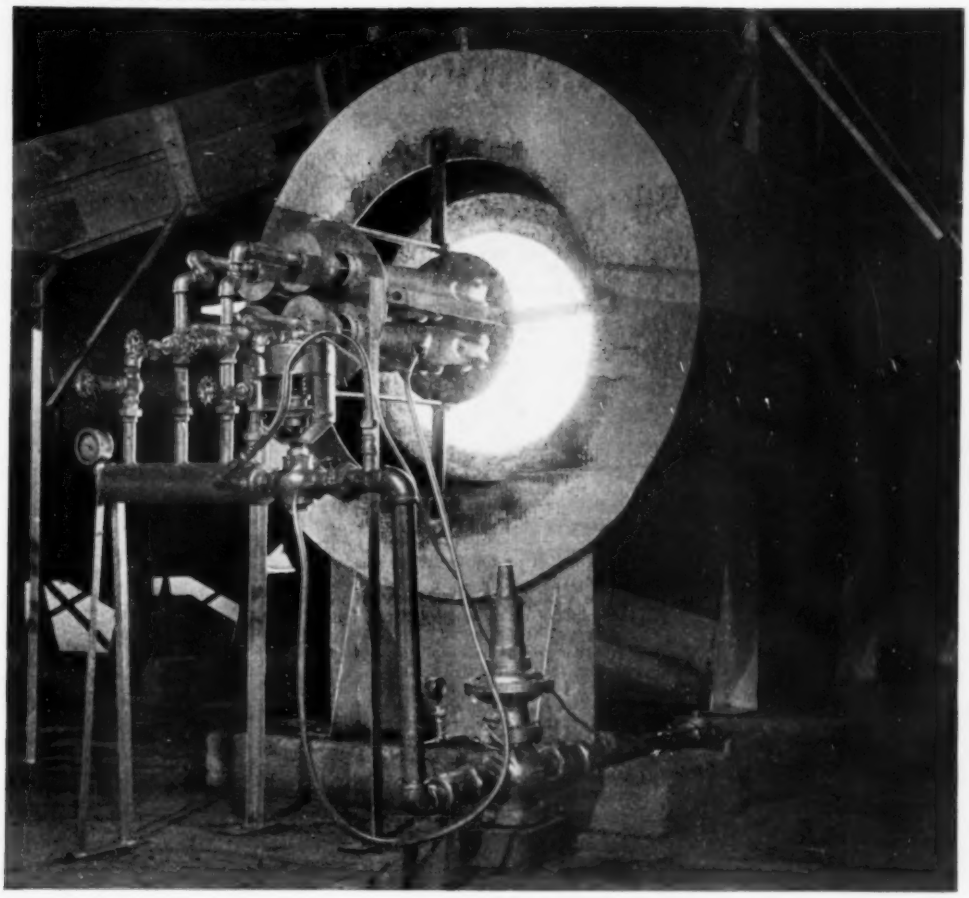


ON THESE PAGES are pictured dehydrating plant equipment. At the left is a drawing of a plant set up to produce meal or pellets, with a mixer. The product flows from right to left, beginning at the dehydrating drum marked F. Other equipments: G—Stationary chopper. H—Drag chain conveyor. J—Screw conveyor. K—Hammermill. L—Mixer. M—Pellet mill. N—Belt conveyor. O—Bucket conveyor. P—Pellet cooler. Q—Conveyor to storage or railroad car. There are many variations of this set-up in the dehydrating industry.

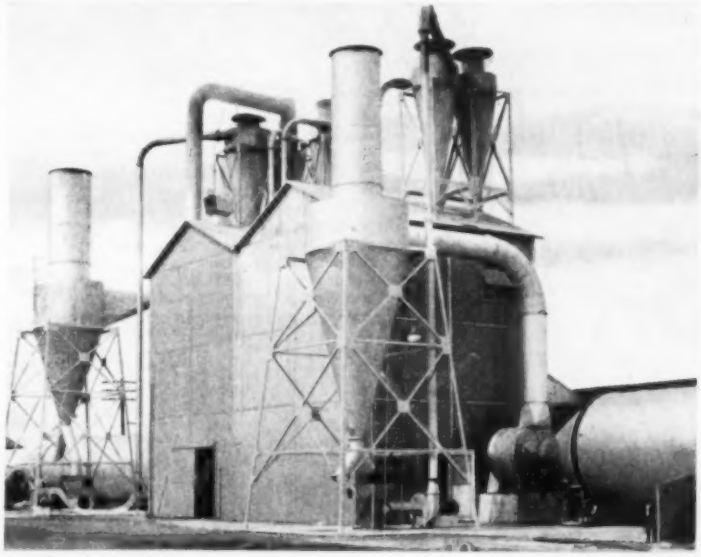
A DUMP TRUCK from the field discharges chopped alfalfa into a feeder pit. From here it will be fed to the driers as shown in the picture at the right. There are many kinds of automatic feeders that can be adjusted to deliver the right amount of alfalfa to match capacity of the drier.

ALFALFA MOVES up this feeder to the dehydrating drums. Many different feeders are in use, some of them built by the dehydrators themselves. Some are thermostatically controlled as to rate of feeding, others require an operator to regulate the flow of material. This one feeds two drums.

PROCESSING MACHINERY

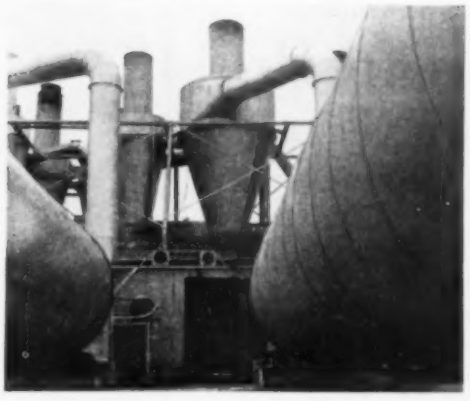


THE FIRE BOX end of this drying drum glows in the night. The rotating drum lifts the chopped alfalfa and allows it to drop through the hot, dry air in the drum, thus removing moisture. Furnace temperatures at the discharge end are around 1,800° F. Some driers operate on natural gas, others on fuel oil and some on liquefied petroleum gases like propane.



MOST DRIERS are outside, but buildings like this house other machinery. The big cyclone cooling collectors towering in the sky take the alfalfa and hot air from the drier. The steam escapes outside and the alfalfa falls to the bottom. It goes through this cycle again before going to the hammer mill.

SOME OPERATORS crush and shred alfalfa before it goes to the driers, particularly when the product is stemmy. More rapid drying and other advantages are thus attained. This is one of several types of shredders.



IN A TUNNEL of metal, looking down the line between two drums toward the plant building entrance. This will house the other machinery shown in the pictures in the right hand column.

HAMMERMILLS grind alfalfa to desired particle size.

SIFTERS are used at times to grade alfalfa, separating coarser portions.

MORE DEHYDRATORS are cooling their product before storage to help preserve carotene. A typical cooler.

THE FINAL STEP, sacking. There is some bulk handling of meal and pellets in storage and shipment.

What Makes Alfalfa Quality in Processing

By Harlow Schmidt

Alfalfa Industry Consultant, Milwaukee, Wis.

IN the alfalfa dehydration industry the foundation for quality in dehydrated products starts in the field. For the moment we will assume that the fresh chopped alfalfa harvested before the bloom or in the early bloom stage is delivered quickly to the processing plant. At this point the responsibility of retaining quality is up to the operator in charge of the mill.

Quality in processing is accomplished in the following systematic series of operations:

1. Perfect controlled feeding of the fresh chopped alfalfa to the dryer according to temperature changes in the dryer proper.

2. Supplying oxygen free gases to the dryer chamber according to temperature changes in the drying process.

3. Since the fresh green alfalfa is reduced in particle size before going into the drying chamber, the hot gases serve as a conveyor easily carrying the alfalfa through the drying operation fast. Proper preparation makes better drying because it allows the dryer to operate at lower temperatures and the alfalfa dries faster, thus retaining more carotene and vitamin A. While in the drying process, each particle of alfalfa is protected by vapor which is developed from the heat drawing the moisture out of the alfalfa.

4. After drying and before grinding or pelleting, the alfalfa goes through a quick cooling process to remove any remaining heat and moisture. Up to this time foreign materials are removed from the alfalfa at two points. These separations remove not only metal but wood, glass, stones, heavy stems, etc.

5. From the cooling cycle the alfalfa goes to the grinding or pelleting steps. Before these operations the material must go over the magnet to remove any remaining metal. Grinding in large capacity grinders with ample screen area helps to reduce friction heat that would normally be impregnated into the dehydrated alfalfa which would reduce carotene and vitamin A.

6. The cooling step is most important for quality in processing as this operation lowers the temperature of the product quickly to where it will retain most of its carotene and vitamin A.

7. Sacking cooled meal is the final step before blending and cold storage.

What Is Processing?

Processing means a systematic series of operations in the production of something. You can easily see where the dehydration of alfalfa must be very systematic when we can safely say that 85% moisture alfalfa is completely processed and in the bag within five minutes with 7 to 9% moisture content in the finished product.

Processing at the dehydration plant consists of mechanically feeding the fresh green alfalfa to the dehydrator as required by the drying temperature that is set for uniform top quality. The drying is done quickly in a drying medium relatively free from oxygen. All foreign materials are removed from the product at a minimum of three separation points. Temperatures are maintained at levels where moisture can be removed from the alfalfa and kept in the form of a vapor until exhausted from the dryer leaving the dry product ready for grinding.

Grinding requires the industry to use 3/64" mesh screens in most hammer mills. However, different mill designs produce a bit different texture or grind; therefore the mesh of the screen in a mill may vary slightly.

Cooling of the alfalfa meal has been very satisfactory in the past few years and it has become a "must" with the industry. This cooling is very simple now and it makes possible loading meal directly from production into freight cars and into storage with no danger of overheating or fire.

This used to be a big question in the mind of many a dehydrator, but no more. The American Dehydrators Assn. has been conducting a number of regional dehydration production schools for dehydrator owners, operators and other employees. All members of the American Dehydrators Assn. have the privilege of sending any number of employees to these production schools to get the answers to any of their processing problems. Good dehydration results from these meetings where free exchange of ideas and good practices are brought out. As a result of these meetings, all information is published and used by the alfalfa dehydration industry as handbook.

One of the most important subjects at the production school is temperature control and control maintenance, as perfect automatic control of a dryer makes for good dehydration. Without a question, the Powers temperature regulator (which can be called the nerve center of the processing plant) is the most important instrument on a dehydrator.

This regulator can easily be adjusted to give good quality meal which is the ear mark of good hydration. Today there is no problem in producing good uniform quality meal at all times because the controlling mediums used now are free from foreign materials that used to cause the control systems to get out of adjustment or balance. There is very little maintenance required to keep a control system operating correctly.

Once again it must be remembered that the temperature regulator and control system not only control the heat supplied to the dryer but also control the amount of alfalfa that is fed to the dryer, all of which is done according to temperature changes about a setting that is made for a top quality product.

The question, "What makes for good dehydration?" can be answered in a few simple lines as follows:

1. A continuous supply of raw material to the dryer on a 24-hour-a-day basis day in and day out.

2. Perfect control of feeding of the raw material to the dryer.

3. Complete control of the fuel burned in the furnace supplying the heat for the dryer.

4. Ample supply of air available to the furnace to complete combustion and to be heated for use in the drying process.

5. Elimination of excess oxygen in the drying chamber.

6. Quick drying to prevent ever increasing losses of carotene and vitamin A.

HARLOW SCHMIDT points to the Powers temperature regulator on the drier. This instrument controls the entire drying operation.

FARMING COSTS WILL RISE

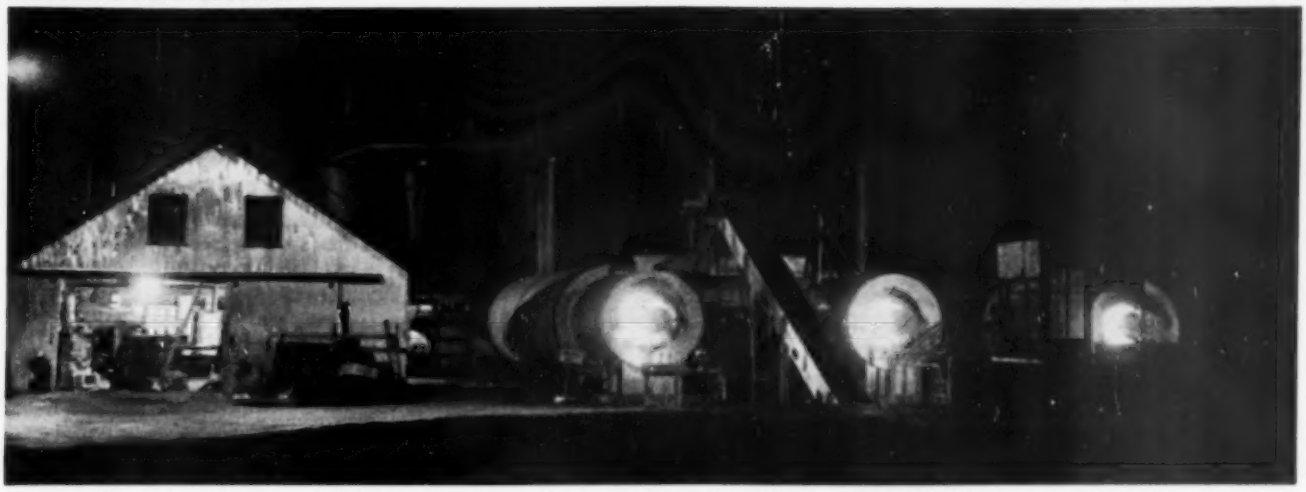
EAST LANSING, MICH.—Farming expenses will go up 4 or 5% in the coming year, Michigan State College farm economists predict.

WILL BUILD ELEVATOR

PERRY, OKLA.—The Farmers Exchange, a cooperative group, has announced plans for construction of a 150,000-bu. grain elevator here this winter. The cost is estimated at $150,000.

BIG SKY
BRAND
Northern Grown Alfalfa
DEHYDRATED ALFALFA MEAL
BIG SKY DEHY, INC.
MINOT • NORTH DAKOTA • GRANVILLE
COMPLETE CROP CONTROL
with
ALL ALFALFA GROWN and PRODUCED
on
BIG SKY RANCH
GRANVILLE, NORTH DAKOTA

A HIGH PERCENTAGE of dehydrating plants are in river valleys and particularly exposed to flood hazards. The big Kaw Valley flood of 1951 looked like this near Lawrence, Kansas. It ruined thousands of acres of alfalfa and put many plants out of operation for as long as a year.

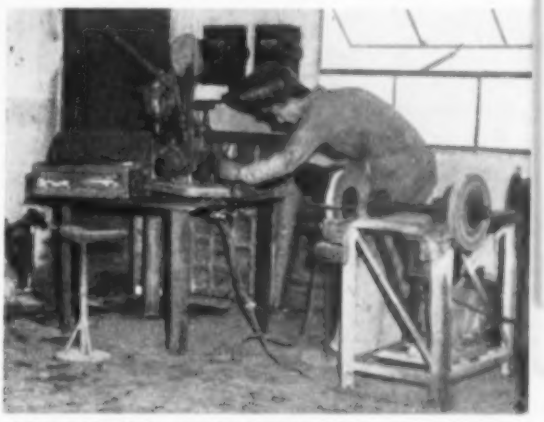


WHEN ALFALFA is ready to cut, plants run 24 hours. Across alfalfa land, dehydrating units glow through the night.

DEHYDRATORS HAVE TROUBLE

THE alfalfa dehydrator is subject to the whims of nature to a greater extent than almost any other businessman. If it rains, the crop will be too wet and his plant cannot run. Continuous rain may put the plant beyond the proper cutting stage before it can be harvested. Too little rain often means a small crop or none at all. Again, no operations. The dehydrator, outside the dry but irrigated areas, expects to lose about 30% of his potential running time during his producing season, which may run from April to the first frost in October over the biggest part of the growing territory. Many an unexpected freak of weather comes along each year to upset the alfalfa processor's plan to harvest the growing crop at precisely the right time for highest quality.

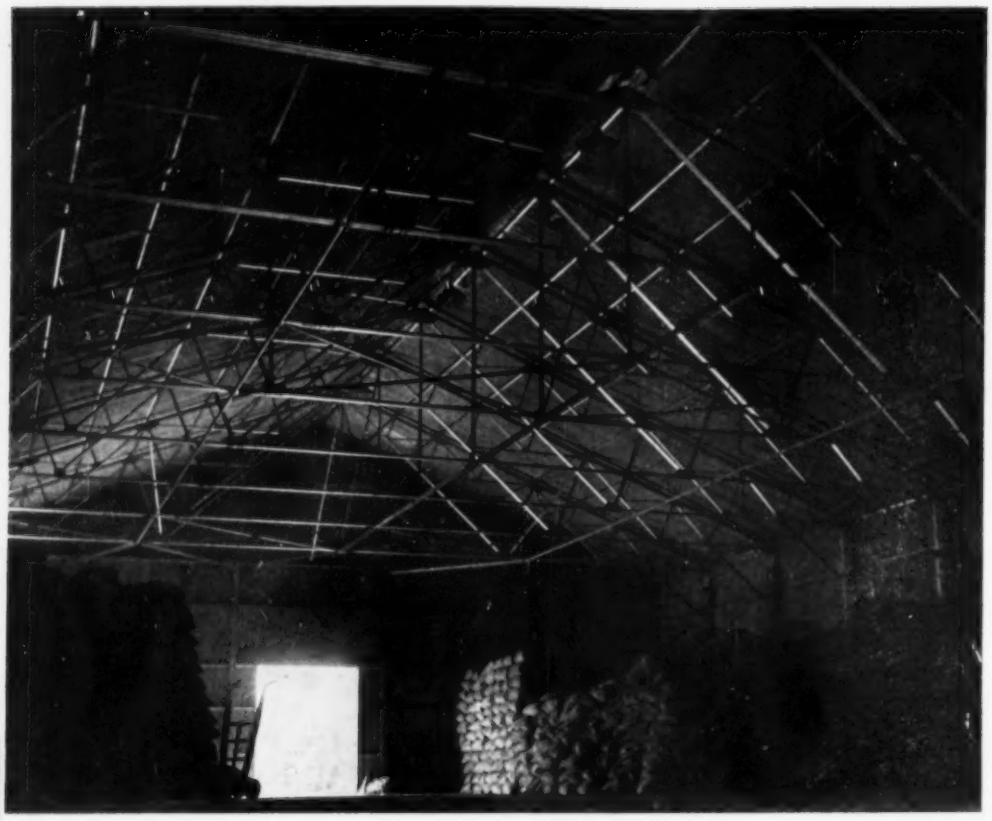
TOO LITTLE WATER hurts as greatly as too much. Here two dehydrators inspect the sorry picture of an alfalfa field shriveling for lack of rainfall. Drouth is an ever present hazard for all but a few operators, in irrigated areas.



BREAKDOWNS are another bugaboo. They always happen in the midst of a rush period and cost the dehydrator heavily. Most firms have their own repair shops to meet these emergencies.

"DOWN TIME" is what a dehydrator calls idleness like this. When it rains, alfalfa is too wet to handle and plants shut down. "Down time" varies with the season and plant location but a 30% loss of potential full operating time is about normal. A rainy season can cripple a dehydrator just like a dry one can.

DEHYDRATING requires complex accounting for proper control. And Uncle Sam makes extra headaches with payroll and other taxes. The dehydrator is a busy man during the producing season.



ALFALFA MEN start the harvesting season with nearly empty warehouses and fill them up during the season for later distribution.

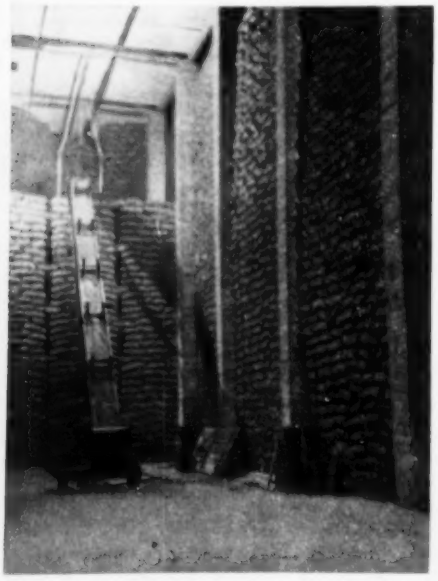
ALFALFA MEAL IS NEEDED THE YEAR AROUND

So Dehydrators Have a Big Storage Problem

THE bulk of the dehydrated alfalfa production in the great producing area of the Middle West, at least, occurs during June, July, August and September, although with favorable weather the season may extend six weeks longer at both ends and there is some winter production in warmer climates. While the biggest part of production comes in the June-September period, the feed industry wants supplies delivered on a more or less uniform basis throughout the 12 months, with the peak demand coming during the non-operating season of the dehydrator.

Thus, a storage problem is created, and it is intensified by the perishable nature of carotene, the principal vitamin constituent of dehydrated alfalfa meal. To meet this problem, alfalfa dehydrators have invested considerable money in storage facilities and in research to develop ways of carotene stabilization. Cold storage and storage under non-oxidizing atmosphere are expensive, running from $1 to $2 per ton per month, depending on the circumstances. In addition to the cost of maintaining the storage facilities, there are labor charges, insurance, financing cost and the like. And brooding over every alfalfa warehouse like an evil genie is the great hazard of fire and explosion from this highly combustible material.

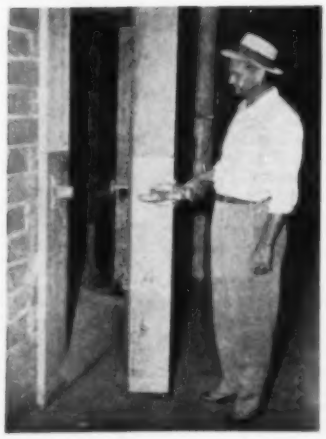
ELUSIVE CAROTENE is the reason for many storage headaches. At the right, in laboratory technician measures carotene on a colorimeter.



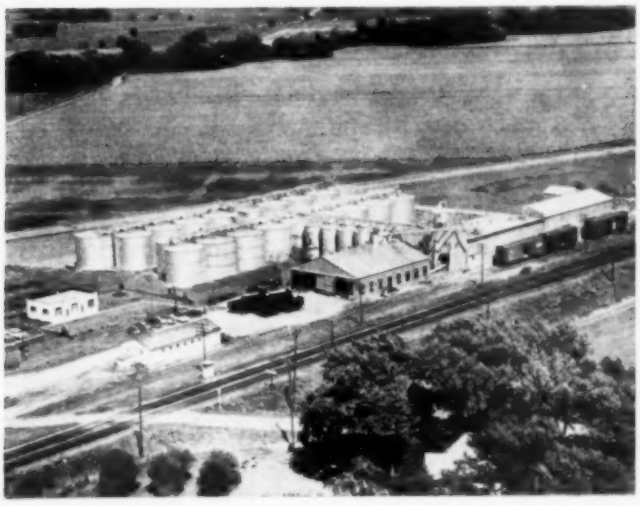
ALFALFA stacked high in cold storage for winter.

THE ALFALFA industry owns many large storage warehouses with excellent track facilities like this.

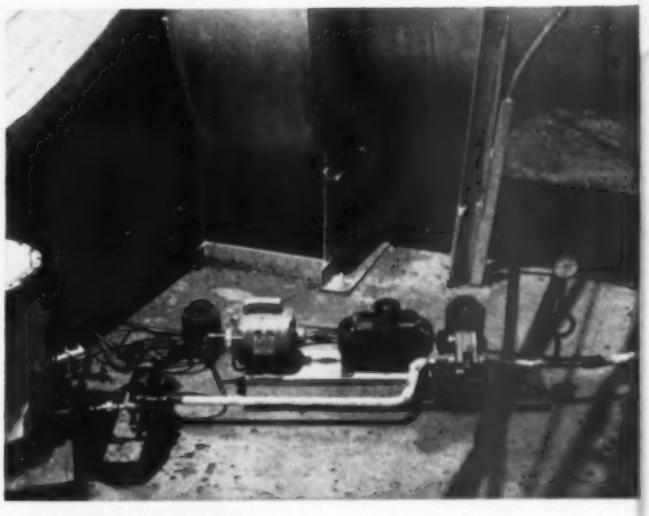
CAROTENE PRESERVATION — THREE METHODS



1—COLD STORAGE. The most extensively used method for carotene preservation is cold storage. Carotene loss is greatly retarded by low temperatures. Most of the refrigerated alfalfa is carried in big cold storage plants like the one at the left above. Some dehydrators have limited storage in cold rooms at their plants, illustrated in the center picture. Public storage at low temperatures also is available to a limited extent in refrigerated caves such as the one pictured at the right at Coldspur, Kansas.



2—GAS STORAGE. The loss of carotene is a function of time and temperature in the presence of oxygen. Carotene also is preserved by storage in tanks in an atmosphere of non-oxidizing gas. This atmosphere is achieved by burning the oxygen out of air with gas by special equipment. This picture shows a line of storage tanks in which meal or pellets are kept under this gas pressure.



3—ANTIOXIDANTS. Another avenue of carotene preservation, not as fully developed as others, is use of antioxidants, which coat alfalfa particles with a harmless substance that shuts out oxygen. Hundreds of substances have been tested and a few have shown promise. This equipment is being used on a commercial scale to apply antioxidant to alfalfa. From the container at the left the antioxidant in an oil solution is pumped to a mixer.

MOST ALFALFA is stored in bags, but in addition to bulk storage in steel tanks as shown above, the product in pellet form is now being stored in specially prepared concrete tanks like these.

CONSTANTLY SEEKING new ways to improve their product, these dehydrators are pictured at the Western Regional Research Laboratory in California watching extraction of juice from alfalfa in an experiment.

ALFALFA QUALITY IN STORAGE, HANDLING

•By Joseph Chrisman
Cerophyl Laboratories, Kansas City, Mo.

THE quality of the feed which graces the table of the swine, cattle, poultry or other feed consuming animals is dependent upon the quality of the ingredients which go into its manufacture.

I have long been an admirer of that famous slogan of E. R. Squibb & Sons, which states: "The priceless ingredient of any product is the honesty and integrity of its maker."

Joseph Chrisman

It is probably safe to state, from within the body of the dehydrated alfalfa industry, that no other single ingredient of any mixed feed is so subject to wide fluctuations in the various attributes which go to make up its "quality." Color, grind and texture from a physical standpoint and protein, fiber, carotene (pro vitamin A), riboflavin and the myriad other nutritional factors known and unidentified go to make up its "goodness."

Most of the nutritional factors of dehydrated alfalfa meal are made or improved, lost or impaired, considerably ahead of the storage warehouse or blending plant. They will be affected by seed selection, field management, fertilizer practices, insect control, harvesting procedures and timing and, to a limited extent, by dehydration itself.

Exceptions to this general statement are found in the ascorbic acid (vitamin C) and carotene (pro vitamin A). While these two nutritional factors can be affected by prior handling, they are also subject to loss from the time the alfalfa plant is cut in the field until it is fed to the animal or bird and the magnitude of this loss or the rate at which it is effected can be controlled, within limits, by the handling of the dehydrated meal during storage and blending. Thus, the quality of the outbound carload is tied up with the quality of workmanship from field to final delivery.

The dehydrated alfalfa industry is very closely tied into agriculture. Good agricultural practices will assure good starting material if weather conditions permit. That is a great big IF. However, under the very best conditions, there are bound to be differences in the characteristics of the alfalfa harvested — those characteristics which go to make up its quality.

The first step in the effective control of the grade or quality of the outbound carload to the feed mixer is establishment of good sampling practices. This is true whether the meal is bound directly to the feed mixer or to the blending plant or to storage for later use. If several lots of meal are being blended with the intention of making 600 bags of meal of uniform quality and appearance then only by knowing, within close limits, the quality of each lot, can a finished carload be made to meet requirements proposed for it.

Improper sampling has probably led to more disputes between buyer and seller than any other single factor. Laboratory methods and techniques in assaying are far more accurate than usual sampling methods in the dehydrated alfalfa industry, yet it is quite common to find disputants arguing over the relative accuracy of two laboratories rather than over the two methods of sampling and subsequent handling of the sample. Loren V. Burns has recently published an article on sampling which is well worth the time of any dehydrator's reading.

Protein Is Stable

Protein is, of course, very stable and an analysis made today should be usable in blending a month from today if the product has been stored where there is no big pick up or loss of moisture content. If meal is stored containing 17 lbs. protein per 100 lb. and the meal at time of storage contained 4% moisture and, due to high humidity storage conditions, the meal picks up to 8% moisture in the final sample, then the protein assay will drop to somewhere in the neighborhood of 16.4% protein on analysis due to dilution with the extra water in the meal. This might be an extreme case, but not impossible. Likewise, if meal goes into storage at 10% moisture and, under very low humidity conditions, it drops to 5% moisture before using, it may be found that the protein assay is up to 17.7% or 17.8% protein.

It is good practice to resample all lots which have been stored for any considerable length of time before blending or shipping. Of course, in the case of carotene (pro vitamin A) it is imperative to sample and analyze immediately before blending or shipping, since losses in vitamin A potency can run as high as 1% per day under high temperature conditions.

Usually the first cutting in the spring will be high in protein, carotene and the other vitamins which go to make it a good feedstuffs supplement. Subsequent cuttings will be lower in quality until the final cutting in the fall which is ordinarily the best. The year 1952 in the midwestern states presented a sorry picture on this final cutting due to drought combined with a very early killing frost.

One Acute Problem

The protection of the perishable carotene is probably the most acute problem of the industry today. The very perishability of this most important factor is the major direct cause of the extreme variability in market prices between summer and winter. The price curve of 17% protein—100,000 I. U. Vitamin A meal is almost the mirror image of the production curve in the great middle U.S.A. territory. As more meal is stored under conditions which preserve carotene, or is treated to stabilize this perishable factor, winter and summer prices will tend to become more nearly on the same level. They probably will never present anything like a straight line curve however, because of the costs involved in special methods of storage or chemical additions to stabilize. One of the great advantages would be the removal from market in the flush production season of distress carloads of meal which have to be sold as made if they are to bring the price of the coveted 100,000 I. U. meal.

Preservation storage for 1,000 to 1,500 tons of high carotene meal should permit the blending out of a total of 3,000 tons of standard grade of 100,000 I. U. meal for uniform delivery throughout a 12 month period. If this were universally done the inevitable sale of a great volume of meal at below cost of production in the summer months might be avoided and the entire industry be put on a much sounder basis.

If or when the new antioxidants become available and gain widespread usage they too will tend to give a similar stability to the market.

But to utilize these storage methods or stabilizers to the greatest effectiveness it will still be necessary to take the various grades which nature provides and blend them to a standard product as required by the fowl or animal which consumes the product. Thus, we return to the original thesis that the quality of the outbound carload is tied up with the quality of workmanship from field to final delivery, and the honesty and integrity of the maker are involved all along the line.

FEED CONFABS HELD IN NORTH DAKOTA CENTERS

FARGO—Five feed dealers' nutrition conferences, conducted by North Dakota Agricultural College, the North Dakota Feed Dealers Assn. and the State Poultry Improvement Board, were completed at NDAC recently.

Earlier sessions in Jamestown, Dickinson, Minot and Devils Lake were attended by 280 dealers and others.

The conferences provided the dealers with technical information on livestock and poultry feeding to enable them to do a better job in meeting the feed problems of their North Dakota farm patrons.

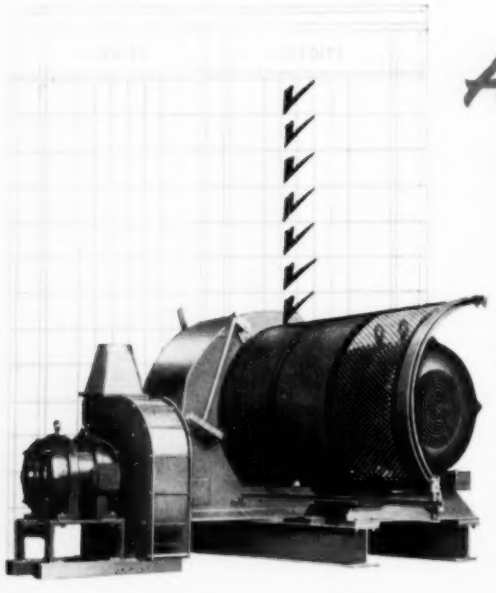
STUDY CHEMICAL CROP DRYING, GROWERS TOLD

LINCOLN, NEB. — Producers should secure all available information on the use of chemicals to speed up pre-harvest drying of crops, Neal Shafer, University of Nebraska agronomist, said in a recent issue of "The Eradicator," published by the Nebraska State Division of Noxious Weeds.

He notes that application of chemicals for rapid drying of foliage is a standard procedure in the alfalfa seed producing areas of California. This results in more seed of higher quality and greater uniformity.

POPCORN WITH CHLOROPHYLL

CHICAGO — Popcorn containing chlorophyll soon will be on the market, according to William H. Beaudot, president of the National Association of Manufacturers.



Always in the **PROFIT** *column*

with FAIRFIELD-HUGHES Hammermills

Feed mill operators find that Fairfield-Hughes Hammermills have a capacity for profitable operation far beyond most machines. Their expert design, quality workmanship, and rugged build bring more efficiency into the grinding operation. Screen changes by remote control eliminate costly shutdowns. Operators remain at the controls instead of making trips into the pit. Elevating capacity remains constant, through an individually powered fan, regardless of mill loads. Power is saved, costs reduced. The Fairfield-Hughes Hammermill continues to produce until the job is completed. Write for Bulletin 1050.

THE FAIRFIELD ENGINEERING CO., MARION, OHIO

FAIRFIELD

COLUMBIA SOFT PHOSPHATE

A low-cost, finely divided source of phosphorus which will readily mix in your formulas to give a uniformly dispersed phosphorus.

Write for information and prices

COLUMBIA PHOSPHATE CO.

1007 Washington Ave.
St. Louis 1, Mo.

"field SELF PROPELLED Queen"®

and NEW self-unloading trailer=economy PLUS

*PICKUP ATTACHMENTS OPTIONAL

One Man Cuts-Chops-Loads-Unloads

Here is a real professional implement . . . designed and built for the dehydrating industry by practical dehydrating operators. Many "Field Queen" units are in use today – including the first unit, built in May 1948. Design and construction have been proved and refined in 5 years of actual, large-scale field work. The "Field Queen" gives the operator what he wants . . . dependable, faster, better cutting at lower cost per ton. Order your "Field Queen" and self-unloading trailer now to insure 1953 spring delivery.

"Field Queen" Cutter-Chopper

One-man operation, day and night, is fully practical with the "Field Queen." The operator faces forward, with easy finger-tip control of all working parts. His view to front, sides and rear is unobstructed. Variable controlled ground speed, hydraulic power lift and reel control, and swivel-mounted sickle meet all operating conditions. Balanced division of weight between front and rear wheels, plus the largest tires on any field cutter, enable "Field Queen" to work where others bog down. Minimum time out for upkeep — due to heavy-duty construction and simplified design, choice of thrifty low-speed engines — gasoline, LP-gas, or Diesel fuel. Full 7 or 8-ft. cut — easily roadable. *New pickup attachment (optional extra) to pick up hay downed by weather.

Self-Unloading Trailer

New 1953 model introduced after two years of intensive experimental work and field testing weighs only 6000 lbs. Used with "Field Queen" or pull-type cutters, it carries a full truckload of chopped hay (5 to 6 tons.) Pulls easily due to oversize tires, even in wet or rough fields. New simplified drive — only one conveyor chain used to unload hay. Gets power direct from "Field Queen" takeoff or (with other cutters) from auxiliary engine. Unloads completely in 3 to 5 minutes — no spilling, no waste. A profitable investment for every operator.

CONTACT

BERT & WETTA
MAIZE, KANSAS

FIELD EQUIPMENT FOR THE DEHYDRATING INDUSTRY MANUFACTURED BY DEHYDRATOR OPERATORS

SEND YOUR SAMPLES TO

Alfalfa Processors Laboratory

For Fast • Accurate • Courteous
Economical Laboratory Analysis

We analyze Protein • Fat • Carotene
Calcium • Moisture • Salt • Fibre
Phosphorus • True Vitamin A • Ash
by "AOAC Methods of Analysis"

For Quality Control Without the Expense of Maintaining and Equipping a Laboratory Call . . .

Alfalfa Processors Laboratory

MArket 5333 • 3002 F STREET • OMAHA, NEB.

ALFALFA MEAL

Dehydrated and Suncured

QUALITY—UNIFORMITY—SERVICE

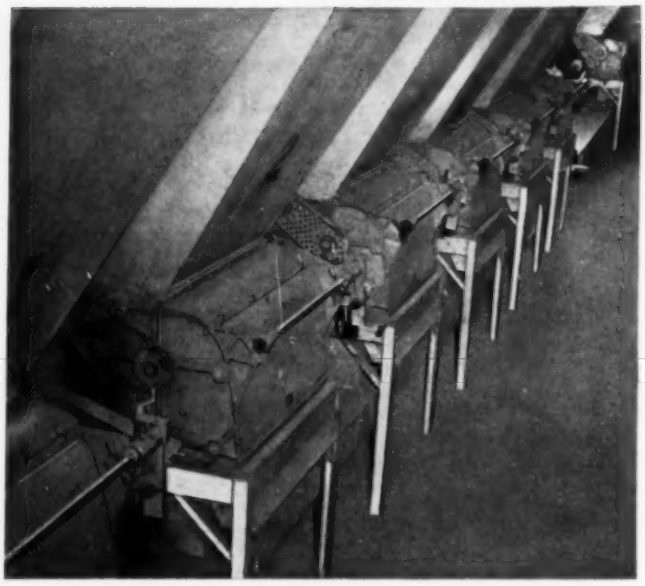
RURAL DEHYDRATORS
Bird Island, Minnesota
Phone 29

THAT GOOD **MEDOGREEN ALFALFA**
IT'S UNIFORM
The Best Meal of the West
Blended with the Best in the East
Assures You of the BEST MEAL at a Fair Price

BREMCO ALFALFA MILLS, INC.
NEW BREMEN, OHIO Phone 35 and 25

Or Call the Following for Your MEDOGREEN Alfalfa Meal

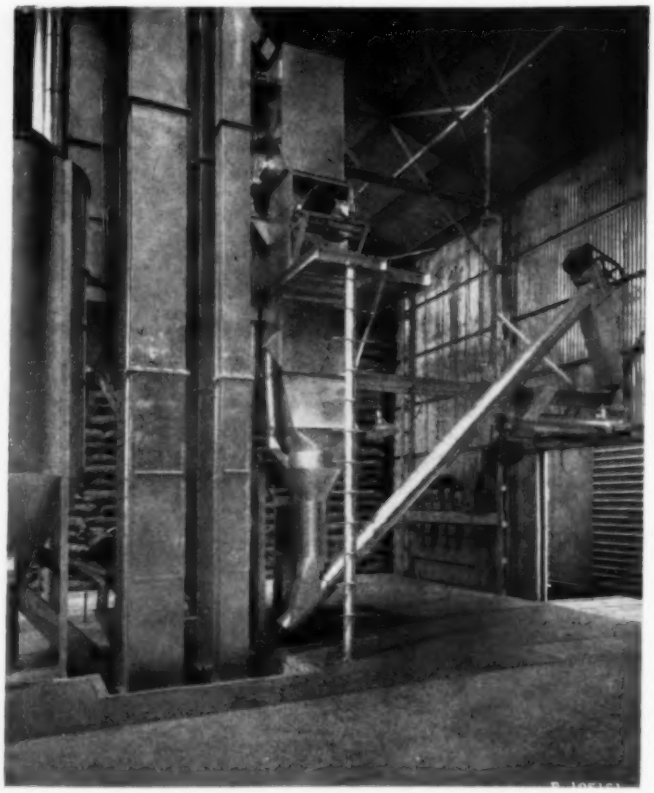
Bosworth Commission Co.	Boston, Mass.
Jesse C. Stewart Co.	Pittsburgh, Penn.
McMullen-Irby Co.	Atlanta, Georgia
Earle T. Robertson Co.	Knoxville, Tenn.
Horton & Snyder Co.	Roanoke, Virginia
Ezl. Dunwoody Co.	Philadelphia, Penn.



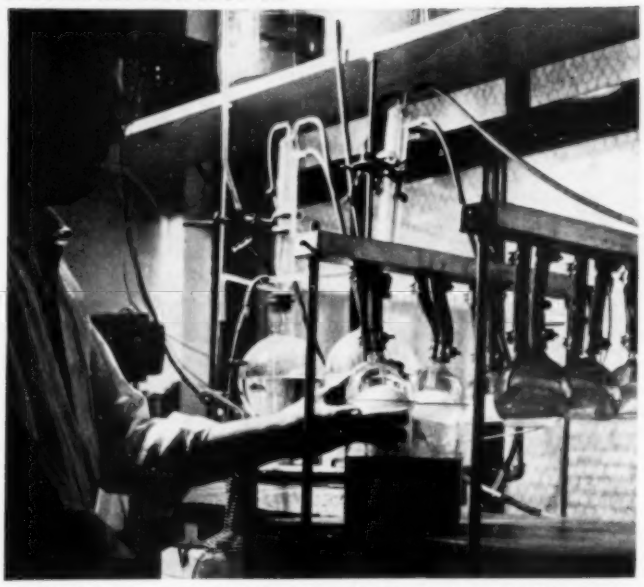
ALFALFA BLENDING must be exact. A line of percentage feeders.

DEHYDRATORS STRIVING To Attain It, Laboratories and

THE great demand in the formula feed industry is for a uniform and standardized dehydrated alfalfa product. Both dehydrators and feed manufacturers are working toward this end and today the majority of transactions are based on a standard of a 17% protein meal containing not less than 100,000 International Units of vitamin A on arrival at destination. Almost any producer can ship meal of this quality during the height of the operating season, but to maintain a standard of this kind all the year around, blending plants are necessary to mix different protein and vitamin levels to produce a product that meets the standardized basis. The alfalfa dehydrating industry is continuing to move steadily toward greater standardization and uniformity in the products it sells to the feed manufacturer.

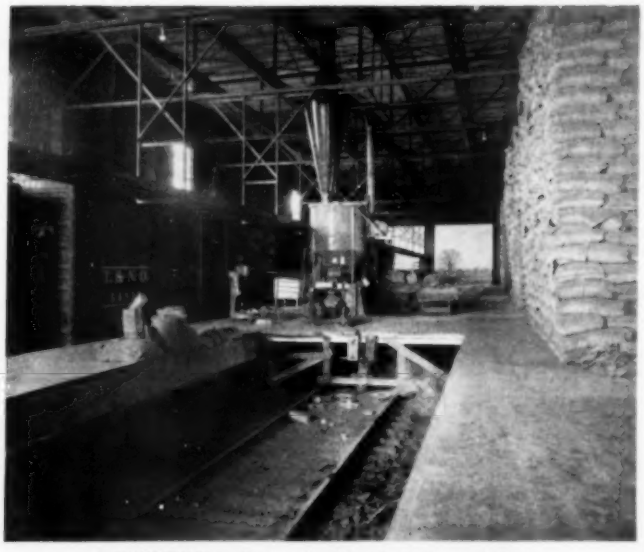


NEW SPECIAL machinery has been developed for bulk loading, like this in a midwestern blending plant. After blending in the mixer at the left, the material is elevated to an automatic scale (top right), descending then to a feeder that funnels the meal to the auger conveyor, stretching toward the loading platform at the right. The projection of this leg extends into the railroad car.



CAREFUL laboratory control is an important part of the blending process.

FOR STANDARDIZATION
Blending Plants Work Together



A BLENDING unit on a loading shed of a warehouse.

PIEHL'S
ALFALFA MILL

Dehydrated and Suncured

ALFALFA MEAL

. . . .

QUALITY—SERVICE

ALSO

HAY AND STRAW

BLISSFIELD, MICHIGAN
TELEPHONE 34

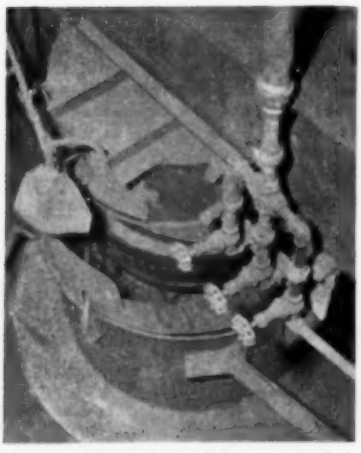
THE
HOWARD MANN
COMPANY

1800 COCKRELL AVENUE — DALLAS TEXAS

"EQUIPMENT AND SERVICE
for the DEHYDRATING INDUSTRY"

Complete Dehydrating Plants (new and used)—Harvesters—Trailer Loaders—Shredders—Alfalfa Truck and Trailer Bodies—Pellet and Hammermills—Conveyors—Bulk Handling Equipment—Repair Parts—Band Grinding and Instrument Repair Service—Plant Installation or Relocation Facilities.

—LIST YOUR USED EQUIPMENT WITH US—



MUCH ALFALFA meal is now pelleted, either for sale as range cubes or for easier storage or shipment.

AN INTERIOR view of a bulk freight car of alfalfa pellets being loaded for shipment.

HARVESTED, dehydrated, ground, sifted, cooled, blended and sacked, away goes this car of dehydrated alfalfa meal to a feed manufacturer.

SAVE MONEY ON OPERATING COSTS

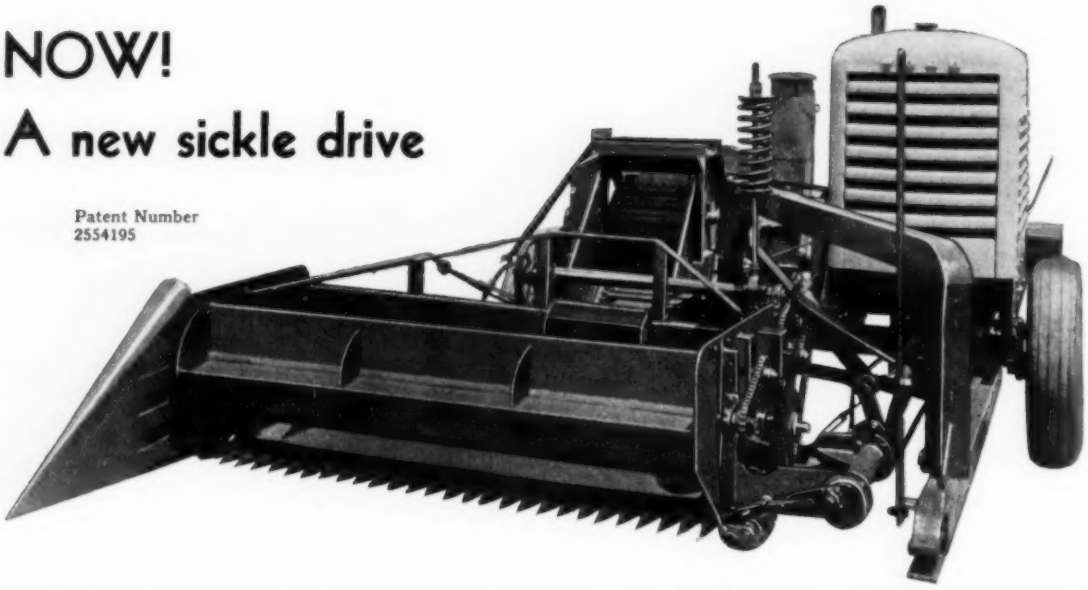
with the

JONES HARVESTER ATTACHMENT

NOW!

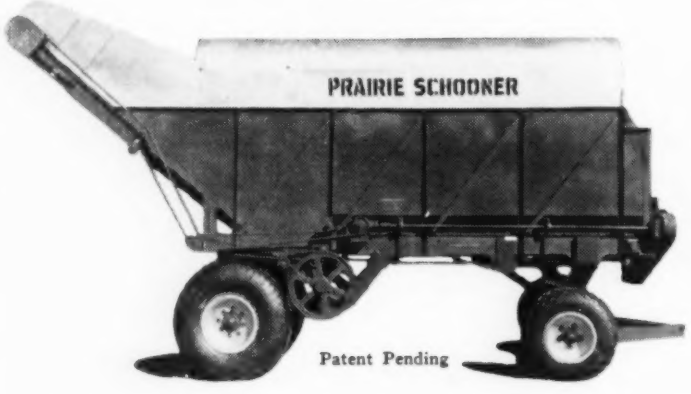
A new sickle drive

Patent Number
2554195



THIS attachment was designed, perfected and field proven by the Jones Electric Machinery Co. to provide the most economical and efficient method of harvesting alfalfa for the dehydrating industry. The new sickle drive eliminates vibration and wear. This attachment is available for immediate shipment in seven- and eight-foot cuts.

***Also*—USE THE ORIGINAL LIVE-BOTTOM TRAILER**



Patent Pending

MANUFACTURED BY THE CAESAR-DAVIS CO. OF TOPEKA, KANSAS

FOR further saving use the original live-bottom trailer. For each trailer in use in the field one less truck is needed, which means a saving in operating and labor costs. This trailer saves all leaves while loading, thus there is no tonnage loss.

We also handle a complete line of Fox choppers and parts. Write, wire or phone today for further information

JONES ELECTRIC MACHINERY CO.

622 Van Buren Phone 29311 Topeka, Kansas

Current Research in Dehydrated Alfalfa Meal

By Herbert C. Schaefer

Manager, Nutrition Research Laboratory
Ralston Purina Co., St. Louis

Secretary, Alfalfa Research Committee
American Dehydrators Assn.

DEHYDRATED alfalfa is one of the basic essential ingredients in nutritious rations for farm animals. As the grains are basic and economical sources of energy and the oil meals the most economical sources of proteins, so dehydrated alfalfa is a basic and economical source of vitamins, especially vitamin A activity in the form of carotene. It is also an excellent source of water soluble vitamins, such as riboflavin, niacin, pantothenic acid, and possibly certain unidentified factors.

During the past quarter of a century much has been learned about the nutritional merits of alfalfa and it has become a very important feed ingredient in the form of dehydrated alfalfa. Out of these findings a great and enterprising alfalfa dehydrating industry has been developed. From this industry has been organized the American Dehydrators Assn., which is composed of the progressive dehydrators of alfalfa.

The aims of the American Dehydrators Assn. are to find ways and means of producing the most nutritious dehydrated alfalfa in abundant quantities at the lowest possible cost. It is their aim to learn more about the merits and new uses for the product they produce.

To help guide the association in this program, is The Alfalfa Research Council. It is composed of scientifically trained men from agricultural experiment stations and industry. The sole function of this council is to guide and advise the association on research, scientific and technical questions applying to dehydrated alfalfa.

Reports Compiled

The agricultural experiment stations of the United States and other countries have been working for many years on the breeding, growing, harvesting, and nutritional values of alfalfa. Most of these investigations have been on the fundamentals. The reports and results of these findings have recently been abstracted and compiled under the auspices of the American Dehydrators Assn.

Under the guidance of the Alfalfa Research Council, a most complete and up to date set of abstracts on alfalfa and dehydrated alfalfa has been produced and made available without charge to anyone interested in alfalfa. These have been distributed to the membership of the American Dehydrators Assn. They have been an excellent source of concentrated information for the individual dehydrators and users of dehydrated alfalfa. The abstracts are brought up to date every year.

Shortly after the Alfalfa Research Council was established it was the feeling of the leaders of the industry that the American Dehydrators Assn. should encourage, finance and sponsor investigations on dehydrated alfalfa at the agricultural experiment stations. Funds were collected by the association from its member dehydrators. These funds are disbursed to the several projects on the recommendations of the research council and research committee to the board of directors of the association.

Every precaution is taken to spend these funds prudently on practical research applying to the production and use of dehydrated alfalfa. The aim is to support investigations which might not be conducted with public funds or to supplement public funds to get data and information which might not be obtained otherwise.

Herbert C. Schaefer

The projects being financed at present are as follows:

1. "Unidentified Growth Factors in Dehydrated Alfalfa" University of Arizona

This is being sponsored at the University of Arizona, College of Agriculture under the supervision of Dr. A. R. Kemmerer. The alfalfa is grown and processed under controlled conditions and evaluated for its nutritional merits on chicks. The results indicate that dehydrated alfalfa produces growth responses that cannot at present be attributed to any identified or known nutrient. This project has an important implication because of the extensive use of dehydrated alfalfa in chicks starting on broiler rations.

It is probable that this investiga-

Mr. Feed Manufacturer:

Hayward's Dehydrated Alfalfa Meal

All Year 'round Will Assure you Real Dependability • In Nutritional Care!

For Poultry Rations
For Swine Feeds
For Ruminants
For Cattle Feeding
. . . .
Protein
Vitamins
Minerals
. . . .

HAYWARD progressively maintains modern plant and control laboratory facilities for your quality protection.

HAYWARD • INC.

Manufacturers of

DEHYDRATED ALFALFA MEAL

Main Office and Plant
Oak Harbor, Ohio
Telephone 2311

Other Plants at
El Centro, California,
and Loomis, Neb.

ALFALFA RESEARCH COUNCIL—Pictured at a recent meeting are these members of the Alfalfa Research Council, left to right: Gerrish Severson, University of Nebraska; R. V. Boucher, Pennsylvania State College; J. L. Krider, McMillen Feed Mills; H. S. Wilgus, Peter Hand Foundation; H. C. Schaefer, Ralston Purina Co.; W. D. Maclay, Western Regional Research Laboratory, Department of Agriculture; R. E. Silker, Kansas State College; John Kephart, National Alfalfa Dehydrating & Milling Co.; L. E. Card, University of Illinois; George Kohler, Cerophyl Laboratories; F. W. Quackenbush, Purdue University. H. J. Almquist, the Grange Co., and J. W. Hayward, Archer-Daniels-Midland Co., were not present when the picture was taken.

tion may reveal that growing conditions and processing may affect the amount of this factor in the alfalfa.

2. "Effect of Soil Fertility on the Palatability and Nutritive Value of Hay and Forage"

University of California

This is a comprehensive and large project. The American Dehydrators Assn. is financing only a part of the investigation.

3. "Toxicity of Stabilizing Agents"

Colorado Agricultural Experiment Station

This has been in progress for several years. In this project the chemicals that stabilize carotene in dehydrated alfalfa are fed to animals to determine whether they can be safely fed to animals over an extended period of time. Some of the antioxidants which prevent the destruction of carotene are poisonous to animals. This precludes their use in dehydrated alfalfa that is used as a feed ingredient.

4. "The Nutritive Value of Dehydrated Alfalfa Meal in Swine Nutrition"

University of Illinois

This research has shown that dehydrated alfalfa contributes valuable nutrition to the brood sow during gestation and lactation. The survival and vitality of the baby pigs have been increased when dehydrated alfalfa was included in the ration at 15%. This work is under the supervision of Dr. S. W. Terrill, head of the swine division of the animal science department.

5. "A Study of Proteins in Alfalfa"

Kansas State College

The purpose of this investigation is to learn more about the characteristics of the protein. This research is under the direction of Dr. R. E. Silker, head of the chemistry department.

6. "Investigation of the Factors Influencing the Survival of Alfalfa and a Study of the Laboratory Procedures for Determining Available Phosphorous in Alkaline Soils"

Michigan State College

This project has great possibilities of practical value to the growers of alfalfa for dehydrators. One of the serious problems of the industry is the depletion of alfalfa stands and decreased yield as the stands become older.

7. "Effect of Trace Minerals on Vitamin A Losses in Stored Feeds"

South Dakota Agricultural Experiment Station

This investigation is of vital interest to feed manufacturers or purchasers of dehydrated alfalfa and other sources of vitamin A activity for animal rations. As trace minerals are used more extensively, it is of value to know whether they have a destructive effect on vitamin A activity.

8. "The Value of Dehydrated Alfalfa Meal in Improving Digestion and Growth Rates of Steers Fed Poor Quality Roughage"

Texas Agricultural and Mechanical College

Roughage is always a problem with all cattle and it is of great value to the beef cattle industry to develop a program for the use of low grade or inferior forage. More needs to be known about the influence of high quality dehydrated alfalfa on the rumen flora or activity.

9. "The Nutritional Value of Dehydrated Alfalfa Meal as a Source of Vitamin B_{12}, Folic Acid, and Biotin in Breeder Rations of Chickens and Turkeys"

Texas Agricultural and Mechanical College

This project is conducted by Dr. J. R. Couch, who has been very active

CEROPHYL'S CAROTENE INSURANCE
FOR FEED MANUFACTURERS
ALL YEAR AROUND

Science combines with Nature to bring you standardized, dependable high-vitamin dehydrated alfalfa meal all year around. Cerophyl's exclusive patented process of storage under inert gas preserves the field-fresh quality of choice alfalfa through winter months. Pictured above are the 46 storage tanks for preservation of carotene at our Midland, Kansas, blending plant.

Cerophyl Laboratories, Inc.
2438 BROADWAY • KANSAS CITY, MISSOURI

Processors of: Viet and Cerophyl, Vitamin Supplements in Human Nutrition, Hundred Grand Brand Dehydrated Alfalfa Meal, Clovogras Brand Dehydrated Grasses and Clovers, Protamone Brand Iodinated Protein for Dairy Cattle, Greenmelk Vitamin Supplement for Poultry and Cerophyllin-D, a Chlorophyll Derivative Supplement for Dog Food.

DEHYDRATING PLANTS
• MIDLAND, KANSAS
• LAKEVIEW, KANSAS
• GRANTVILLE, KANSAS
• HENRIETTA, MISSOURI
• ELM GROVE, LOUISIANA

BLENDING PLANTS
• SHREVEPORT, LOUISIANA
• MIDLAND, KANSAS
• KANSAS CITY, MISSOURI
PROTAMONE and GREENMELK PLANTS: KANSAS CITY

in the field of chicken and turkey nutrition, especially in the study of antibiotics and animal protein factor.

10. "Utilization of Carotene in the Animal Body"

Colorado Agricultural Experiment Station

This investigation has shown that when chickens are fed dehydrated alfalfa meal there is a more efficient utilization of the carotene as a source of vitamin A activity than when carotene alone or from other natural sources is in the ration. An attempt is being made to identify the substance in dehydrated alfalfa which affects the efficiency of the utilization of carotene.

11. "Use of Dehydrated Alfalfa as a Supplement for Wintering Pregnant Ewes"

Montana State College

Encouraging results have been observed during several winters, and there is evidence that dehydrated alfalfa is of real value in feeding wintering pregnant ewes.

12. "The Effect of Feeding Dehydrated Alfalfa to Range Ewes"

Utah Agricultural Experiment Station

Dr. Louis Harris is the leader of this investigation. The ewes are kept on winter range. It was observed that the ewes receiving dehydrated alfalfa lost less weight and produced heavier lambs.

These projects are presented as evidence of the practical value of the research which is financed by the funds from the American Dehydrators Assn.

Before the annual meeting which is to be held Jan. 11-14, 1953, a progress report of each of the above projects will be submitted by investigators. These will be reviewed and studied by the research council and research committee.

Applications for grants-in-aid for funds from the American Dehydrators Assn. should be submitted to Lloyd Larson, secretary of ADA before Dec. 1, 1952. These applications are to be accompanied by an outline of the project so that they can be reviewed by the members of the council before the annual meeting. This will enable the council members to make suggestions or corrections on the projects.

The above method of procedure has been sent to the directors of the agricultural experiment stations by Dr. W. D. Maclay, chairman of the Alfalfa Research Council.

Research Council Membership

The membership of the Alfalfa Research Council consists of the following:

Representatives from Public Institutions	Term Expires
R. V. Boucher, Pennsylvania State College	1955
F. W. Quackenbush, Purdue University	1955
L. E. Card, University of Illinois	1954
Gerrish Severson, University of Nebraska	1954
W. D. Maclay, Western Regional Research Laboratory	1953
R. E. Silker, Kansas State College	1953
George Kohler, Cerophyl Laboratories, Inc.	1955
J. W. Hayward, Archer-Daniels-Midland Co.	1955
J. L. Krider, McMillen Feed Mills	1954
John Kephart, Natl. Alfalfa Dehy. & Mlg. Co.	1954
H. J. Almquist, The Grange Company	1953
H. S. Wilgus, Peter Hand Foundation	1953

Dr. R. V. Boucher is professor of agricultural and biological chemistry at Pennsylvania State College. He has been a leader and pioneer in investigating the vitamin and other nutrient requirements of poultry.

Dr. F. W. Quackenbush is the head of the department of agricultural chemistry at Purdue University. He is the past president of the Association of American Feed Control Officials and has extensively investigated the chemistry of carotene and its measurement in dehydrated alfalfa.

Dr. L. E. Card is head of the animal science department at the University of Illinois. He has been a leading investigator in poultry nutrition and one of the key personalities in the Poultry Science Assn. He is highly respected for his keen insight in evaluating a research project.

Dr. Gerrish Severson is the head of the department of farm chemurgy at the University of Nebraska. He has a great interest in the program for developing new uses for farm products.

Dr. W. D. Maclay is head of the biochemical division of the Western Regional Research Laboratory of the U.S. Department of Agriculture at Albany, Cal. His research consists of the biochemical application of processing to the farm products from the West Coast. This includes research on stabilizing the carotene in dehydrated alfalfa. They have discovered a carotene stabilizer which is now in commercial use in California. Dr. Maclay is chairman of the Alfalfa Research Council.

Dr. R. E. Silker is head of the department of chemistry at Kansas State College of Agriculture and Applied Science. He is a pioneer in research on dehydrated alfalfa. He was formerly associated with W. J. Small working on the chemistry of dehydrating alfalfa.

Dr. George Kohler is vice president and director of research of Cerophyl Laboratories, Kansas City, Mo. He has spent many years investigating the chemistry of forages and has an excellent background on the science of dehydrated alfalfa.

Dr. J. W. Hayward is director of research of Archer-Daniels-Midland Co. The W. J. Small Co. is a division of this great corporation. He has an excellent background in the nutrition of farm animals and in the processing of vegetable oil meals. His early work led to the discovery of the effect of heat or toasting on the nutritional value of solvent soybean oil meal.

Dr. J. L. Krider is vice president and director of research and sales of McMillen Feed Mills, Decatur, Ind. He was formerly in charge of swine research at the University of Illinois and was a pioneer in the study of the value of dehydrated alfalfa in the ration of the brood sow on dry lot.

John Kephart is director of research for The National Alfalfa Dehydrating & Milling Co. He was a pioneer and one of the original investigators of antioxidants to stabilize the carotene in dehydrated alfalfa.

Dr. H. J. Almquist is vice president and director of research of The Grange Co., Modesto, Calif. He has many fundamental discoveries to his credit. Formerly he was associated with the University of California in poultry nutrition investigations.

Dr. H. S. Wilgus is director of research for The Peter Hand Foundation, Chicago, Ill. He has some important discoveries in poultry nutrition to his credit from his fundamental studies at Cornell University and later as head of the poultry department at Colorado Agricultural and Mechanical College.

This group of men represents much valuable talent, ability and experience which is available to the benefit of the alfalfa dehydrators and feed industry.

The Research Committee which evaluates and reviews the research for the board of directors consists of the following:

Joseph Chrisman, Cerophyl Laboratories, past president of the American Dehydrators Assn., chairman.

Loyd M. Faris, W. J. Small Co. Division, Archer-Daniels-Midland Co., and now president of the American Dehydrators Assn.

Dr. L. E. Card, University of Illinois.

H. C. Schaefer, Ralston Purina Co., secretary of committee.

The research that is financed and sponsored by the association has received much time and careful study from this committee and the council. As a member of this group it is a real pleasure and privilege to work with these industry and agricultural leaders to encourage the development of information on such an important feed ingredient for farm animal rations.

ALFALFA WAREHOUSE BURNS

FALLS CITY, NEB.—The Henke Alfalfa Milling Co. warehouse was destroyed by fire recently resulting in a loss estimated at $10,000. The building contained about six tons of baled straw and 20 tons of baled alfalfa hay and clover. The warehouse was of frame and tin construction and was 32 by 72 ft. in size, with an 18 by 34 ft. extension. Firemen were called to the milling company later in the day to extinguish a blaze in the power house adjoining the building. Homer J. Henke is owner of the milling concern.

HIGH GRADE FEEDERS

Feeding high grade cattle means selling feed in a high priced steer; however, final finish on a high grade steer tends to become more expensive, warns the Animal Husbandry Department of Michigan State College.

SERVICE

that's

• D. C. A.
D. C. A., Inc.,
4000 Board of Trade Building,
Chicago 4, Illinois
Tel.—Wabash 2-0028
Teletype CG 1188

our slogan

• KOELSCH
Charles J. Koelsch Grain Co., Inc.,
209 Grain & Flour Exchange,
Boston 9, Massachusetts
Tel.—Hancock 6-3115
Teletype—BS 587

and our nation wide coverage, with private leased wires connecting all offices assures prompt, efficient, unexcelled brokerage service.

• T. D. F. CO.
T. D. F. Company,
Chamber of Commerce,
Buffalo, New York
Tel.—Madison 2323
Teletype—BU 484

we are linked together to better serve YOU in all commodities.

BROKERS IN FEED INGREDIENTS

HAUGEN'S DEHYDRATED ALFALFA MEAL

Top Quality Meal

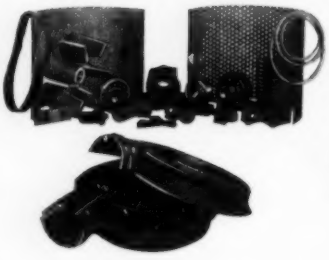
HAUGEN DEHYDRATING CO.

MAYVILLE, N. DAK.

HECO Screens and Hammers

Preferred by the Dehydrating Industry

HAMMERS SCREENS AND REPAIRS



FOR ALL TYPES OF HAMMER-MILLS

Tempered High Quality Steel

Punched for Maximum Capacity

Attractive Prices and Discounts

Large Warehouse Stocks

Prompt Shipment

EDWARD J. HECK & SONS CO.

1102 FARNAM Atlantic 6666 OMAHA, NEBRASKA

ALL TYPES OF EQUIPMENT AND REPAIRS FOR FEEDMILLS, GRAIN ELEVATORS, DEHYDRATING AND ALLIED INDUSTRIES

GUARDIAN OF QUALITY

HAYMAKER FEEDS COMPANY

ALFALFA MEAL OF HIGHEST QUALITY

PLANT LOCATION: DARR, NEBRASKA

Telephone 505

Cozad, Nebraska

member ADA American Dehydrators Association

THE REYHER MILLING CO.

McCLAVE, COLORADO

In the Heart of the Rich Arkansas Valley

Dehydrated **ALFALFA MEAL** Suncured

OUR FIRST OBJECTIVE—CUSTOMER SATISFACTION!

member ADA American Dehydrators Association

The quality of our meal is held to high standards by strict control and modern methods of harvesting, drying, grinding, cooling, warehousing, carloading and laboratory analysis.

EVERY CAR ANALYZED BEFORE SHIPMENT

Phone Wiley, Colorado 541 for Your Needs

PROJECT: Growth Stimulating Factors in Dehydrated Alfalfa for Chicks

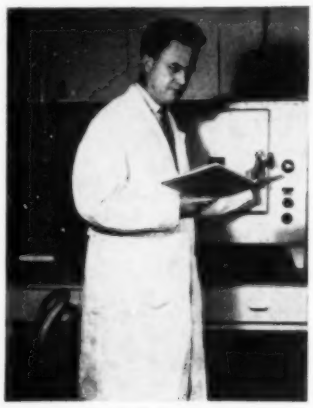
LEADER: A. R. Kemmerer

PLACE: University of Arizona, Tucson

The purpose of the present study is first, to establish whether dehydrated alfalfa contains factors yet unidentified which will stimulate the growth of chicks; and second, to determine how the variety of the alfalfa, the conditions under which it is grown, and processes of dehydration affect the amount of these factors. In last year's report the results from four experiments indicated that alfalfa carefully dehydrated in the laboratory contains growth-stimulating factors for the chick. In these experiments the growth response was more marked from rations which contained crystalline B complex vitamins than from rations which contained brewers' yeast. Also vitamin A-deficient chicks responded better to the growth factor than non-depleted chicks.

In a few of the experiments conducted last year, alfalfa did not produce a growth stimulation. This year's work shows that this was due to difference in the lots of chickens used. Several lots of chicks from the same hatchery but obtained at different times were fed the same basal diet and the same dehydrated alfalfa. The alfalfa definitely stimulated growth in some of the lots but not in all of them. When the chicks did not show a growth response from the alfalfa were fed a vitamin A-deficient diet prior to being placed on experiment, a growth response was produced by the alfalfa. Apparently, feeding the vitamin A-deficient diet reduced the amount of growth factors stored in the chick's body.

Two samples of commercially dehydrated alfalfa were compared with the laboratory sample for growth-stimulating effect. One of the samples of commercial meal gave the same amount of growth stimulation as the laboratory sample, while the other sample produced no effect. A considerable number of commercially dehydrated alfalfa samples have been obtained from members of the American Dehydrators Assn. in various parts of the U.S. and will be tested for growth factors in the near future. From the data obtained, it will be possible to determine the variability in amount of the factors in different samples.



A. R. Kemmerer

(Note: Dr. A. R. Kemmerer is head of the nutrition department at the University of Arizona.)

PROJECT: Dehydrated Alfalfa Meal in the Drylot Hog Supplement

LEADER: S. W. Terrill

PLACE: University of Illinois, Urbana

How much dehydrated alfalfa meal should be included in the drylot hog-fattening supplement? The Illinois Station initiated an experiment in the fall of 1951 to help answer this question.

The specific objective of the experiment was to study the effect of three levels (10%, 20% and 30%) of dehydrated alfalfa meal in a well-fortified protein-vitamin-mineral supplement. The supplements were self-fed free-choice with shelled yellow corn to growing-fattening hogs in drylot while they gained from an initial weight of 100 lb. to a final weight of 200 lb. in live-weight.

The supplements that were self-fed free-choice with shelled yellow corn are given in Table 1. The supplement fed to the pigs in Lot 1 contained 10% dehydrated alfalfa meal. The alfalfa meal was increased to 20% and 30% of the supplements for Lot 2 and Lot 3, respectively, and replaced equivalent amounts of soybean oil meal. All supplements were pelleted.

The nine pigs in each of the 3 lots were confined to concrete floored pens and were provided with adequate shelter. In each lot the shelled corn

S. W. Terrill

Table 1. Supplements Self-fed Free-Choice With Shelled Yellow Corn

Ingredients	Lot Number 1	2	3
	%	%	%
Dehydrated alfalfa meal	10.0	20.0	30.0
Solvent soybean oil meal	55.0	45.0	35.0
Menhaden fish meal	5.0	5.0	5.0
Meat and bone scraps	5.0	5.0	5.0
Menhaden condensed fish solubles	5.0	5.0	5.0
Corn gluten feed	5.0	5.0	5.0
Dried corn distillers' solubles	5.0	5.0	5.0
BY-100	4.0	1.0	1.0
Aurofac vitamin B_{12} and antibiotic feed supplement	2.0	2.0	2.0
Irradiated yeast[1]	+	+	+
Ground Limestone	2.5	2.5	2.5
Steamed bone meal	3.0	3.0	3.0
Trace mineralized salt	1.5	1.5	1.5
Total	100.0	100.0	100.0

[1]Four grams of irradiated yeast (3000 I.U. per gram) were added per 100 lb. supplement.

and test supplement were offered free-choice in a self-feeder.

A summary of the results of the test are given in Table 2.

The performance of the pigs in all three lots was very satisfactory. The average daily gains of the three lots of pigs did not differ significantly. The pigs receiving the supplement containing either 20% or 30% dehydrated alfalfa meal ate about 0.15 lb. less supplement per pig daily.

The pigs fed the supplement containing 20% and 30% dehydrated alfalfa meal required 17% and 13% less supplement per 100 lb. of gain respectively than the pigs in Lot 1, which were fed the supplement containing 10% dehydrated alfalfa meal. The pigs fed the supplements containing the higher levels of dehydrated alfalfa meal consumed more corn daily and required somewhat more total feed per 100 lb. of gain than the pigs fed the supplement containing 10% dehydrated alfalfa meal.

The results of this test indicate that in a well-fortified, pelleted hog fattening supplement the level of dehydrated alfalfa meal can be increased to 30% without reducing gains significantly. Furthermore, the higher levels of dehydrated alfalfa meal reduced the daily consumption of protein supplement and resulted in a reduction of the amount of supplement required per unit of gain by 13 to 17%.

Table 2. Results of Growing-Fattening Test (1951 Fall Pigs—Group-Fed in Drylot)

	Lot number and treatment		
	1	2	3
	Shelled corn plus supplement containing 10% alf. meal	Shelled corn plus supplement containing 20% alf. meal	Shelled corn plus supplement containing 30% alf. meal
Items compared			
Number of pigs	9	9	9
Av. initial wt., lb.	109	113	111
Av. final wt., lb.	207	211	206
Av. daily gain, lb.	1.93	1.93	1.86
Av. daily feed per pig, lb.			
Shelled corn	5.74	5.66	5.46
Supplement	0.91	0.75	0.76
Total	6.65	7.41	7.32
Feed per 100 lb. gain, lb.			
Shelled corn	298	344	347
Supplement	47	39	41
Total	345	383	388

(Note: Dr. S. W. Terrill is head of the swine division, animal science department, University of Illinois, Urbana.)

PROJECT: Effect of Trace Minerals on Vitamin A Losses of Stored Feeds

LEADER: Andrew W. Halverson

PLACE: South Dakota State College, Brookings, S. D.

Andrew W. Halverson

Carotene storage losses in mixed poultry diets have been studied at the South Dakota Agricultural Experiment Station during the past year. Two carotene supplements, commercial carrot oil and dehydrated alfalfa meal, were added separately to each of the diets. The effect of adding meat scraps plus limestone and common trace mineral salts to the various rations was tested.

Three diets were used in the studies, as follows: (1) a simple corn-soybean starting ration; (2) a simple starting ration containing wheat bran, wheat middlings, oats and sorghum in partial replacement of the corn-soybean ingredients; (3) a mash concentrate containing high vitamin and mineral levels. All diets were stored in paper sacks and carotene losses were measured following storage at different temperatures and for different periods of time.

Carrot oil was more stable than alfalfa meal as a carotene supplement in the simple corn-soybean diet but in the other diets there was no apparent difference in the stability of the carotene from the two sources. Adding meat scraps and limestone increased carotene losses significantly in the carrot oil supplemented rations and only slightly in the alfalfa diets, thus resulting in similar losses with either source of the provitamin. Only slight additional losses resulted from the further addition of trace minerals, and these were mostly confined to the carrot oil rations. The over-all effect of these extra losses with carrot oil supplemented diets was that alfalfa meal became the more stable of the two carotene sources when meat scraps, limestone and trace minerals were present in the diets. The study points to the conclusion that changes of diet composition affect carotene losses to a greater extent with carrot oil than with alfalfa meal.

More recent work has shown that the separate addition of oats, wheat bran and middlings, meat scraps, fish meal or mineral ingredients to the corn-soybean ration did not significantly affect the stability of alfalfa meal carotene. However, increasing the level of alfalfa from 5 to 20% caused an appreciably greater rate of loss of carotene, approaching that of undiluted alfalfa, so it appears that the carotene-stabilizing agents in the corn-soybean oil meal ration were ineffective in the high alfalfa ration.

Similar work with carrot oil showed that meat scraps and also fish meal addition, in the absence of limestone, caused increased carotene losses in the simple corn-soybean diet. Oats and wheat bran and middling additions likewise increased losses but the effects were somewhat variable. Adding limestone as a single ingredient had no effect upon carotene stability. Also, free trace mineral salts caused only small increases in carotene loss when added to the simple diet without other ingredients.

The carotene stability work at South Dakota is being continued and vitamin A storage studies will be started soon. Future work with alfalfa meal will also include an antioxidant-treated product. The simple corn-soybean diet is expected to receive most attention in all supplementary carotene studies, and the relationship of corn, soybean oil meal and alfalfa meal ratios to carotene stability in mixed feeds will be investigated. Studies of the effect of age of the diet ingredients upon the carotene stability picture are also planned.

(Note: Dr. A. W. Halverson is associate biochemist at the South Dakota Agricultural Experiment Station, Brookings.)

NEW BAGS

Here are the bags you asked for

BURLAP • COTTON

PRETTY PRINT

Carefully selected quality, the very best the market affords, made to our high specifications and uniform in size, weight and strength. Modern facilities in our new plant keep the costs down and make it possible to give 24-hour service when necessary. Modern bag printing presses provide a smart colorful finished product.

OUR NEW BAG MANUFACTURING PLANT IS IN FULL PRODUCTION

AGRICULTURAL • COMMERCIAL • INDUSTRIAL

WRITE • WIRE • OR TELEPHONE FOR FULL INFORMATION

MIDWEST BURLAP & BAG COMPANY, Des Moines, Iowa

PROCESSORS AND CONVERTERS OF USED BAGS • MANUFACTURERS OF NEW BURLAP, COTTON AND PAPER BAGS

213 THIRD STREET PHONE 3-8355

DES MOINES, IOWA 213 Third St. 2-8355 | KANSAS CITY, MO. 935 Lydia Ave. HA 1334-5115 | MINNEAPOLIS, MINN. 1710 First St. N. JU 4638 | WESTVILLE, ILL. N. State Street 7031

Members of the Sanitary Institute of America and the National Bag Dealers Association

Dehydrated

ALFALFA MEAL

• Processed Correctly

• Warehoused Properly to Retain All of Nature's Full Bounty of Vitamin A

Packed in either 50-lb. papers or 100-lb. 10-oz. burlap bags

Write Phone Wire

LANDBY DEHYDRATING CO.

A. J. Landby, Mgr. Phone Warroad, Minn.

Plant at Swift, Minn.

Investigate

THE ALLISON HARVESTER

Field Proven by Owners in Texas, Nebraska and Iowa

EQUIPPED WITH "254" FORD ENGINE

Tractor-Mounted • Self-Propelled

Manufactured Exclusively by the

ALLISON MANUFACTURING CO.

BOX 264 OLATHE, KANSAS

It's "NATURALLY" Tops

HIGH in Protein

HIGHER in Carotene

HIGHEST in the Estimation of Its Users

FIREBAUGH

Dehydrated Alfalfa Meal

LESS DUST | TOP TEST BRAND | LOW FIBRE

Grown and Processed by

V. C. BRITTON CO.

Firebaugh, California

CAPEX DEHYDRATED

ALFALFA MEAL

Also All Grades and Grinds Sun-Cured

•

THE A. B. CAPLE CO.

Toledo 5, Ohio

"ARCO" Dehydrated Alfalfa Meal

Rich in Vitamins—Grown on Rich Iowa Soil

Capacity of 4,000 to 5,000 Tons a Season Using Two Heil Drums

Storage Capacity for 2,300 Tons

ARCO DEHYDRATING CO.

LAKE PARK, IOWA

C. E. Arnold, Owner-Manager Telephone: 4261

PROJECT: Factors Influencing the Survival of Alfalfa

LEADER: F. L. Wynd

PLACE: Michigan State College, East Lansing

One of the serious problems of alfalfa production is depletion of alfalfa stands and decreased yields as stands become older. Factors influencing this phenomenon are being studied on a 40-acre experimental field at Evergreen Farms, Texas.

When the experiment is completed, we hope to be able to relate the experimental treatments with the persistence of the stand of alfalfa. Having done this, we then hope to relate the persistence of the chemical composition of the crop as affected by the fertility treatments. In other words, we are trying to show the effect of fertility on survival and also to explain the mechanism of the effects of the treatments in order that the final conclusions will be applicable to other areas and situations.

Obviously, since the experiment involves a study of persistence of stand, the work is not yet completed. The final conclusions must wait until all plots have ceased to produce a commercially significant harvest. When this is accomplished, then the final report can be prepared.

While it is not possible to make final conclusions at this time, we are beginning to suspect that the following situation exists:

1. The comparatively high application of superphosphate to certain plots did not significantly increase the phosphate content of the alfalfa. This is strange in view of the fact that the percentage phosphorus in all samples including the phosphate-fertilized ones were very low. In fact, the percentage of phosphorus found is about the same that we have already detected in areas that were known to be phosphorus deficient. This suggests that the phosphate cycle in these soils is abnormal. We have not yet discovered what has become of the phosphate. We have learned, however, that it is not tied up with the carbonate of the soil, as might be expected. It is much more likely to be a bacterial problem that has been brought on by the intensive, abnormal cultivation which these fields have suffered.

2. None of our phosphorus fractions determined on the soil samples have shown what became of the added phosphorus. We expect to continue this phase of the investigation in the future.

During the coming season, we expect to continue the present series of analyses of alfalfa as scheduled. We also expect to extend our investigations of the phosphorus cycle in these soils.

(Note: Dr. F. L. Wynd is professor of botany at Michigan State College, East Lansing.)

PROJECT: Stabilization of Carotene in Dehydrated Alfalfa

LEADERS: Ralph E. Silker, H. E. Mitchell, W. G. Schrenk

PLACE: Kansas State College, Manhattan, Kansas

The dehydrated alfalfa research program at Kansas State College has been concerned principally with stabilization of carotene and methods of isolating various substances of potential industrial importance. Carotene stability in alfalfa was shown to be improved appreciably by incorporating the alfalfa in mixed feeds. Thus, a practical dairy feed containing 10% of alfalfa meal lost 39% of its carotene in four months at 25 degrees C., while a sample of the alfalfa alone lost 68%. An investigation of the contribution of the individual feed ingredients to the increase in carotene retention showed that ground corn and wheat bran were responsible for much of the improvement. Contrary to the belief of many people, the addition of such minerals as copper, manganese, and iron salts had no effect on carotene stability.

Considerable attention has been given to the antioxidant activity of a number of chemicals when applied to alfalfa meal. Although a large proportion of the compounds tested had little stabilizing effect on the carotene, a few showed sufficient activity to warrant further study.

A method has been devised for fractionating the lipids of alfalfa meal. The method involves passing a petroleum ether extract of alfalfa meal through a bed of tricalcium phosphate. Carotene passes through, while chlorophyll and the xanthophylls are adsorbed by the tricalcium phosphate. The chlorophyll and xanthophylls then are removed from the adsorbent with a mixture of petroleum ether and isopropyl alcohol. From these two fractions a wax was isolated which in turn was resolved into a paraffin, a wax ester, and a solid alcohol. In addition, a sterol was isolated from the chlorophyll-xanthophyll fraction. The research on this sterol was financed in part by the American Dehydrators Assn.

Currently in progress is a study of the effect of the dehydration process on the proteins of alfalfa. This also is being sponsored by the American Dehydrators Assn.

(Note: Dr. Ralph E. Silker is head of the department of chemistry at Kansas State College and Dr. Mitchell is assistant professor of chemistry and Dr. Schrenk, associate professor of chemistry at Kansas State College, Manhattan.)

CATTLE INCREASING

Cattle production on farms has been expanding since 1949, reports the North Dakota Extension Service.

J. R. Couch

PROJECT: The Utilization of Carotene in the Animal Body

LEADER: Paul R. Frey

PLACE: Colorado A. & M. College, Fort Collins, Colo.

Vitamin A deficiency in animals dependent upon forage is most prevalent in semi-arid regions. In such areas the plant carotene is rapidly destroyed by the action of the elements after the plant has been cut or when it becomes dormant due to lack of water. Proper treatment of alfalfa following cutting is therefore essential in order to preserve as much carotene as possible.

With our increasing knowledge concerning the chemistry and metabolic function of carotene vitamin A deficiency in animals is rapidly being eliminated.

The investigations in this laboratory have been concerned primarily with problems involving the mechanism of utilization of carotene within the animal body, and methods of bringing about increased utilization. The work has been supported in part by research grants from the American Dehydrators Assn. The past work indicates that alfalfa contains a nutritional factor which promotes the conversion of carotene into vitamin A within the animal body. Evidence also indicates that carotene per se may have a specific metabolic function.

A number of important observations have been made since the report in the Nov. 17, 1951, Feedstuffs. Feeding trials with chicks have shown that alfalfa which has been stored at room temperature for a period of two years no longer contains this important nutritional factor, at least in sufficient quantity to give significant experimental results. Chicks fed such stored alfalfa did not have sufficiently higher blood levels and liver stores of carotene and vitamin A than did chicks fed pure carotene, the rations in both groups of birds having the same vitamin A activity in terms of carotene.

Paul R. Frey

Another study with chicks has shown that alfalfa ash does not contain the nutritional factor, which eliminates the possibility that the factor is a mineral type of substance.

(Note: Dr. Paul R. Frey is associate professor of chemistry at Colorado A. & M. College, Fort Collins.)

PROJECT: Dehydrated Alfalfa Meal in the Breeder Rations of Hens

LEADER: J. R. Couch

PLACE: Agricultural and Mechanical College of Texas, College Station

Seventy-two single comb White Leghorn hens were separated into four groups of 18 each. The basal ration used in this study was composed of ground yellow corn and soybean oil meal, and was supplemented with minerals and vitamins (less vitamin B_{12}) in quantities which have been shown to be necessary for the mature laying fowl. Group 1 of the hens mentioned above received the basal diet unsupplemented; group 2 received the basal diet with vitamin B_{12} added; group 3 received the basal diet with 5% dehydrated alfalfa leaf meal substituted for an equivalent amount of ground yellow corn, and in the case of group 4, the diet was supplemented with both dehydrated alfalfa leaf meal and vitamin B_{12}.

The addition of vitamin B_{12} to the ration in the case of group 2 increased egg production slightly and produced a definite increase in hatchability. The addition of dehydrated alfalfa leaf meal to the diet increased egg production slightly and had little effect on hatchability. Hatchability was definitely increased through the feeding of dehydrated alfalfa leaf meal in the presence of vitamin B_{12}. Such increase was approximately 10% over that of the group fed vitamin B_{12} alone.

Hens used in this study were kept in individual laying cages with raised screen floors and were artificially inseminated with mixed semen from New Hampshire cockerels three times weekly. It was rather significant to observe that the addition of dehydrated alfalfa leaf meal to the breeder hen ration produced an increase in the percent fertility of eggs from hens fed this supplement. Such an observation has not been heretofore reported.

The most dramatic finding which came out of this experiment was the fact that chicks from hens not fed alfalfa (groups 1 and 2) developed symptoms of vitamin K deficiency after the experiment had been in progress approximately four months. Chicks from hens in this study were banded with standard commercial wingbands. The slight injury produced by piercing the web of the wing would cause the chicks to bleed to death. Blood clotting times were run on blood from chicks which had come from hens in the various groups. When the mother hens had been fed alfalfa, vitamin K deficiency did not occur and the wingbanding did not affect the chicks. This is the first instance in which a study has been conducted and which shows clearly that alfalfa may serve as an important source of vitamin K in the breeder ration for laying hens in order to give the chick a sufficient carryover of the vitamin from the hen through the egg.

In order to obtain conclusive evidence that the vitamin K was the factor in question, eggs from the hens not fed alfalfa were injected with a water-soluble vitamin K before setting. Control eggs were injected with water. Chicks from the eggs injected with the water-soluble vitamin K hatched, were banded and blood clotting times were determined. Such chicks were entirely normal in all respects. Chicks from the eggs injected with water died of vitamin K deficiency.

(Note: Dr. J. R. Couch is professor of poultry husbandry and professor of biochemistry and nutrition at Texas A. & M. College.)

FOR *Successful* FEEDING

ALWAYS USE

ALFALFA MEAL

IN YOUR FORMULAS

—AND FOR TOP UNIFORMITY, PEAK QUALITY IN ALFALFA MEAL, ALWAYS USE

ALFALFA≡PVM≡MEAL

WITH **P**ROTEINS

VITAMINS

MINERALS

Needed for Balanced Feeds

Processed and Sold by

CENTRAL ALFALFA, Inc.

LEXINGTON, NEBRASKA

PHONE 760 TWX LEX 991

BIRDWOOD PRODUCTS COMPANY

High Quality Dehydrated Alfalfa Products

17% Dehydrated Meal

Dehydrated Pellets for Range or Bunk Feeding

member American Dehydrators Association

PHONE 399

NORTH PLATTE - - NEBRASKA

Some New Developments in Alfalfa Research

By Dr. L. E. Card
University of Illinois
Member of Research Council, American Dehydrators Assn.

DURING the last 10 years we have been most fortunate in the climate of this country as it is related to crop production. We can hardly expect to be equally fortunate during the next 10 years. In the meantime we must learn more about how to produce more food, and how to do it economically, if we are to maintain the standard of living to which we have become accustomed, and to make it even better.

Dr. DeGraff of Cornell University has put it aptly by saying that in order for that objective to be accomplished "the wellsprings of science must be fed." We must have more and more of the right kind of research. Much of it must be the sort of research which to you and to me does not at the moment appear very practical or productive. I think it could be argued very successfully that the research money which in the long run has been worth the most in terms of results accomplished has been the money spent for things which initially looked a long, long way from practical.

Many examples could be given, such as the early work on hybrid corn which must have looked like the idle dream of a scientist who didn't have his feet on the ground. Exactly the same thing can be said about the early work of Sewall Wright which paved the way for what is now commonly referred to as population genetics, and which is being used widely today in attacking the problems of plant and animal genetics. I feel that we have a responsibility as individuals to do all we can to encourage and to promote research on many, many things, and particularly those things which relate to the food problem of the future.

Now what about research as related to alfalfa? As producers of a product which is widely used in the feed trade, alfalfa dehydrators are concerned, as is the Research Council of the American Dehydrators Assn., with research as it relates to alfalfa as a plant; as it relates to soil types and soil treatments which are important in the production of that plant; as it relates to the mechanical and engineering problems in the development of processing equipment; research on ways of preserving the inherent qualities of the product; and finally research that is related to the utilization of that product. What will dehydrated alfalfa do that possibly nothing else will do but, in any event, what will it do in rations for livestock or poultry?

From the grants that ADA has made, I have selected a few typical examples for brief discussion, after which I should like to tell of some other research on alfalfa which is being carried on independently of ADA.

The first example has to do with the nutritive value of dehydrated alfalfa meal in swine rations. Alfalfa meal has long been used as a source of protein in swine rations. We at Illinois, along with workers at other institutions, have become convinced that there is in alfalfa meal something which in the chemical sense is as yet unidentified, that we call a survival factor. If pregnant and lactating sows are fed liberal amounts of alfalfa meal, we always get a somewhat higher survival among their pigs than from similar sows fed the same ration in dry lot without alfalfa.

Utilization of Carotene

The second example involves a study of the utilization of carotene in the animal body. From one point of view carotene is the most important constituent of alfalfa. But we don't begin to know what we should about the specific uses to which carotene is put by the animal. Since alfalfa also contains several of the water-soluble vitamins, we need to be concerned about the newer findings as to their relationship to the proper utilization of amino acids. Therefore ADA is supporting research along these lines.

The third project on my list is a study of dehydrated alfalfa as a supplement for wintering pregnant ewes. Every dehydrator knows that if his present market outlet in manufactured feed were suddenly wiped out, he would have a problem on his hands in finding a new market. One of the most logical outlets, potentially much greater than the usual mixed feed market, is the range pellet for cattle and sheep. That is one big reason why ADA is supporting this particular project.

Another quite different project is an investigation of the factors influencing the survival of alfalfa, that is, survival of the plant itself. One of the industry's practical problems involves the length of alfalfa stands. We need to know much more about the factors which determine the survival of stands under different soil and climatic conditions.

Proteins in Alfalfa

Next on my list is a study of the proteins in alfalfa. That study could, and I think probably should, be expanded even further to include a study of the amino acids in alfalfa. Plant protein has taken on a tremendously new significance in recent years. We used to think that we had to include animal protein in the ration in order to get satisfactory growth, reproduction, or performance of almost any kind among livestock. That isn't true today. More than 85% of the protein concentrates used in feeding livestock and poultry are of plant origin, and the proteins of young grasses and legumes are among the best we have.

Referring again to carotene, and particularly to its preservation in alfalfa meal, ADA is sponsoring research on stabilizing agents which can be used to hold the carotene potency between dehydration and actual use of the meal. Unfortunately, some of the best stabilizers are toxic to animals. Something over 400 such chemical compounds have been tested to find one or two which are effective but not harmful, so that they might be introduced during processing in a way to make the carotene stable against the losses normally resulting from oxidation.

Finally, the nutritional value of dehydrated alfalfa meal as a source of vitamin B_{12}, folic acid and biotin in

Alfalfa Processors!

Your customers will appreciate the *economy* and *convenience* of handling your products in attractive, sanitary Multi-Wall bags.

Their rugged *strength*, attractive *appearance*, and *convenience* in handling win the approval of dealers and customers alike! The *protection* from moisture and contamination, *freedom* from dust and "smear" provided by Multi-Wall paper bags is your insurance that your products will reach your customers in the same condition as when they left your plant.

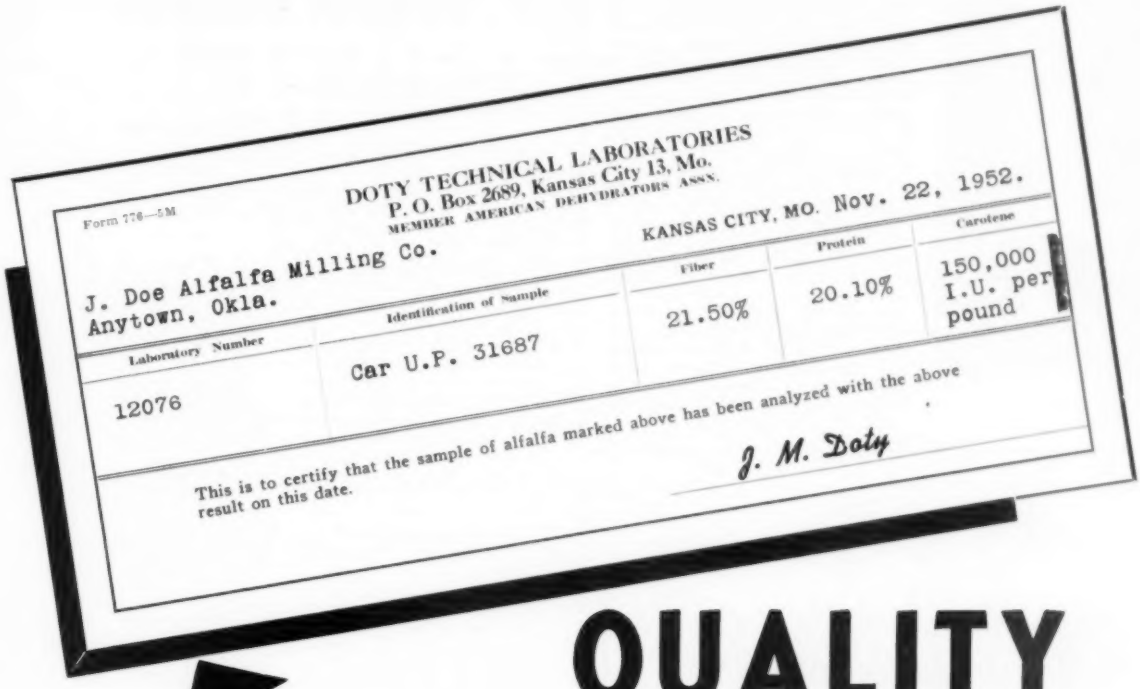
All these exclusive advantages have made *Multi-Wall Paper Bags* the preferred package for ALFALFA and all FORMULA FEEDS.

Hammond Multi-Walls

HAMMOND BAG & PAPER COMPANY

General Offices: Wellsburg, W. Va.
Plants in Wellsburg, W. Va. and Pine Bluff, Ark.

Representatives in the following cities: CHICAGO, ILL • BLUEFIELD, VA. • CHARLOTTE, N.C. • KANSAS CITY, MO. • MINNEAPOLIS, MINN. LIGONIER, PA. • WASHINGTON, D. C. • NEW YORK, N.Y. • COLUMBUS, OHIO • HOUSTON, TEXAS



Form 776—5M

DOTY TECHNICAL LABORATORIES
P. O. Box 2689, Kansas City 13, Mo.
MEMBER AMERICAN DEHYDRATORS ASSN.

KANSAS CITY, MO. Nov. 22, 1952.

J. Doe Alfalfa Milling Co.
Anytown, Okla.

Laboratory Number	Identification of Sample	Fiber	Protein	Carotene
12076	Car U.P. 31687	21.50%	20.10%	150,000 I.U. per pound

This is to certify that the sample of alfalfa marked above has been analyzed with the above result on this date.

J. M. Doty

QUALITY GUARANTEE

LET THIS CERTIFICATE BUILD YOUR BRAND REPUTATION

PROTECT YOUR ALFALFA PRODUCTS WITH OUR LOW-COST SPECIAL LABORATORY SERVICE PLAN

1 KNOW YOUR VALUES—Each car of Alfalfa Meal has a *true market value.* Are you getting the full benefit of your high carotene, high protein production? Are you shipping non-guaranteed production at run-of-the-market prices when you could obtain a better price? You can know what you are selling ALL THE TIME, with the Doty Special Service Plan. You'll save money.

A VIEW OF OUR PROTEIN EQUIPMENT

2 BUILD A REPUTATION—Your brand names and your company reputation will mean more to buyers if they are backed by this laboratory guarantee of the Doty Special Service Plan.

3 SAVE HEADACHES—Doty Service is Accurate and Reliable. Skilled laboratory technicians and modern equipment guarantee good work and stand behind every certificate. We understand your alfalfa problems. We understand feed manufacturers' problems, too.

This Special Service Plan

Available at Remarkably Low Cost to You. Write today for full details, or call Grand 8580

DOTY CALL GRAND 8580

Technical Laboratories

8 W. 9th St., KANSAS CITY, MISSOURI

A RECOGNIZED REFEREE LABORATORY

Members: American Dehydrators Association
Midwest Feed Manufacturers Association
American Association of Cereal Chemists

Dr. L. E. Card

breeder rations of both chickens and turkeys.

Now I should like to comment on a few things which are being done with alfalfa in various parts of the country, but with no reference to the ADA program. I referred briefly to amino acids in connection with the protein of alfalfa. We now know that among the 20 or more amino acids which are important in animal nutrition, several are present in alfalfa in satisfactory amounts. But alfalfa is deficient in one very important amino acid—methionine.

Ten years ago, if a chemist had been assigned the job of finding out how much of each of the amino acids is contained in alfalfa, he would have needed several years to solve the problem with the methods which were then available. But with the newer micro-bacteriological methods this type of problem has been greatly simplified so that the time involved is now only a matter of days. A group of research workers at the Purdue Station in Indiana has been interested in finding out more about the amino acid content of alfalfa, with particular reference to methionine.

Using the micro-biological assay method, they studied 100 different alfalfa clones which had been grown together in the same field, and harvested at the same time, though coming originally from widely different areas and representing several different varieties. When they expressed the methionine content as milligrams per gram of total nitrogen, the values ranged from 72 to 96. They found both high and low methionine samples in each variety tested. This is significant because it means that selection for high methionine content is not a simple matter of choosing one or two varieties. It will be necessary to select within each variety, and on the basis of methionine analysis, in order to develop strains with higher than average protein value. The problem would have been hopeless without the chemical developments in micro-biological methods of analysis.

Considerable research is being directed at the problems involved in alfalfa seed production. Plant breeders are hybridizing alfalfa in an attempt to develop better strains. In doing this they are searching for and making use of self-sterile plants or clones in order to make more rapid progress.

Other workers are concentrating on the use of caustic sprays to simplify the harvesting problem and to increase the yield of seed which can be combined from an acre. These preharvest caustic sprays range from dinitro compounds in diesel oil to potassium cynate and sodium cyanamid. Recent issues of Farm Journal and Country Gentleman carry descriptive articles reporting some of the practical results.

The purpose is to dry up or kill about 80% of the top growth so that combining is simplified and there is less loss of seed. Dehydrators have only an indirect interest in such procedures, because they are usually interested in saving the leaves, not in killing them, but available seed supply is nevertheless important to the dehydrating industry. Incidentally, careful tests show that these caustic sprays caused no measurable injury

ADA Research

By W. D. Maclay

U.S. Western Regional Research Laboratory
Chairman, Alfalfa Research Council

What are the ingredients that have gone into the initiation and development of the association's research program—one that over the long pull will bring tangible benefits to the producer of the raw material, to the user of the finished products, and to the dehydrator?

Included were:

1. An objective appraisal of the nature of its product — its shortcomings as well as its good points.
2. A sincere desire to develop the information essential to the production of alfalfa products of ever better quality.
3. The will to make the effort essential to providing the necessary financing to support a realistic program in the light of the more urgent problems facing the industry.
4. Procurement of research leadership that would provide sound direction.
5. A firm belief of the membership that only through such a program of research could the alfalfa dehydrating industry expect to attain its potential stature in the feed and livestock industries.

The Council salutes the membership of the American Dehydrators Assn. for the fine start which it has made in this endeavor.

W. D. Maclay

VALLEY GREEN

A Brand to Remember

WHEN BUYING ALFALFA MEAL
EITHER DEHYDRATED OR SUNCURED

VALLEY GREEN is always uniform, always top quality. It is obtained from the productive fields of the famous Nebraska Platte Valley right at our plant sites.

NEBRASKA ALFALFA FARMS, INC.

Offices
LEXINGTON, NEBRASKA
PHONE 149

Plants Located at Darr, Neb.
Jack Dillard, Manager

MEMBER OF AMERICAN DEHYDRATORS ASSOCIATION

FOR THE BEST IN SERVICE
TO BOTH PRODUCERS AND CONSUMERS
OF
ALFALFA MEAL
—CONTACT—

HERRING SALES CO.
Board of Trade Bldg.
KANSAS CITY, MO.
Phone GRand 6122 TWX KC 370

NEWSOME COMMISSION CO.
Phoenix Bldg.
MINNEAPOLIS, MINN.
Phone MAin 4491 TWX MP 122

to the plant root crowns or to the harvested seeds.

Another Production Problem

Extensive tests with organic sulfur compounds have shown that seed treatment prior to planting will greatly increase the average stand of healthy plants. The compounds provide a chemical coating to protect the seed against such things as seed rot, seedling blight and damping off —fungous problems of the young embryo.

Seed Treatment Recommended

Another production problem has been extensively studied in Iowa. In that state there are many areas in which the soil is deficient in phosphorus, and in those areas it is common to find stunted alfalfa with short, brittle stems and small leaves. Yields are low, and the alfalfa that does grow is very low in phosphorus. Since the phosphorus isn't in the soil, there is no way for it to be in the plant. It often runs as low as 1/10 of 1%, and that is low enough to cause severe phosphorus malnutrition in the livestock to which it is fed, unless some supplementation is made.

Effect of Phosphate

The Iowa workers undertook a test beginning back in 1946 in which they added phosphorus to these deficient soils at rates of 30, 60, 120 and 240 lb. of P_2O_5 per acre for comparison with untreated soil. Super-phosphate was broadcast and disked in in the spring. Alfalfa was seeded with oats as a nurse crop. The yields in pounds per acre, first cutting only, in 1947, 1948 and 1949 were as follows:

	1947	1948	1949
No treatment	1500	2900	2160
30 lb. P_2O_5	2200	2420	2320
60 lb. P_2O_5	2440	2800	2760
120 lb. P_2O_5	2760	3340	3040
240 lb. P_2O_5	3300	4360	3940

Finally, I should like to mention two studies involving the utilization of alfalfa. At the Washington Station dairy cows were used in a change-over type of experiment comparing dehydrated alfalfa prepared in three different ways and fed in a 30% grain replacement type of ration. The alfalfa all came from the same field and was all harvested on the same day. It was fed in finely ground, chopped and pelleted form, and the cows were switched during the course of the test in order to reduce the effect of individual variation. All milk was reduced to a 4% fat-corrected basis. The amounts of feed consumed, above the minimum requirements, were the same in all groups. There were no differences in body weight gains, nor in the percentage of fat in the milk, but the average production per cow per day was significantly greater for the cows fed the pelleted meal than for those fed the finely ground meal. The chopped alfalfa group was intermediate.

Unidentified Nutrients

I referred previously to the matter of unidentified nutrients or growth factors in alfalfa, and I should like to tell briefly about a test that Dr. Scott of our department has been conducting with chicks in cooperation with Dr. Hansen of the department of dairy science. It all came about when the dairy people received a letter from a farmer in the southern part of the state saying that some sun-cured hay that he was feeding had apparently caused excessive salivation, first in cattle and then in horses. A sample of the suspicious hay was obtained and a test experiment planned. In order to reduce expense, it was decided to use the chick as the test animal. For comparison with the sun-cured hay, they bought dehydrated alfalfa meal in the open market. The original hay was not straight alfalfa, but contained some timothy, some lespedeza and some clover, and it was very poor quality hay.

Both the sun-cured hay and the dehydrated meal were fed to day-old chicks at a level of 5% in a semi-purified type of ration which contained all known nutrients necessary for rapid growth. Later they fed levels of 5, 10, 20 and 40% of these two products, and carried the chicks to 28 days of age. Much to their surprise, the chicks fed the poor quality hay meal actually grew better than the chicks fed the dehydrated meal, and there was no growth depression until as much as 40% of the meal was included in the semi-purified ration.

Comparison Made

This stimulated comparison of good quality sun-cured and dehydrated meals from Kansas and Colorado. A paper containing the detailed results has been submitted for publication and I have Dr. Scott's permission to give the summary and conclusions. They follow:

"Chick growth was stimulated when either dehydrated or sun-cured alfalfa was added to a semi-purified ration containing all known nutritional factors.

"Dehydrated meal at a level of 10 to 20% gave a response comparable to that from 5% of a forage juice concentrate.

"The growth factor seems to be more concentrated in sun-cured meal than in dehydrated, since the former gave its maximum response at the 5% level. This suggests the possibility of some destruction by the high temperatures used in processing dehydrated meal.

"When added to a semi-purified diet, alfalfa meal does not depress growth in chicks until the level of intake exceeds 20%. Even the 40% level did not materially depress growth to four weeks below that of chicks receiving no alfalfa.

"The existence of the growth factor in alfalfa is difficult to demonstrate in non-depleted chicks when the meal is added to a practical chick starting ration.

"Growth inhibition, on the contrary, can be more readily demonstrated with the practical than with the semi-purified diet, suggesting that other natural feed ingredients also contain substantial amounts of the growth inhibitor."

This sort of test simply emphasizes the viewpoint that alfalfa dehydrators, through ADA and its research council, should be interested in finding out all that can be learned about alfalfa, both as to advantages which can be claimed for the dehydrated product and any existing limitations which need to be overcome.

* *

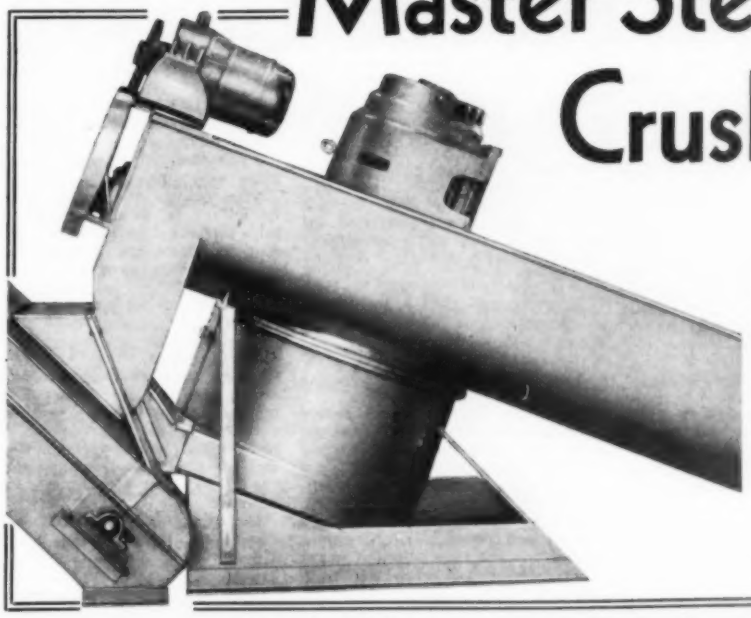
Editor's Note: The foregoing article is from a report presented by Dr. Card at the Texas Dehydrators Conference, Oct. 15, College Station, Texas.

Picture Credits:

Olav Smedal, Valo Feature Service, Ames, Iowa; John Holm, Healey Milling Co., Gothenburg, Neb.; Lloyd Larson, American Dehydrators Assn., Kansas City, plus many individual dehydrators who submitted pictures for this special issue.

Increase Quality *and* Quantity
Reduce Production Costs
with the

Master Stem Crusher



Use the Master Stem Crusher and your meal can be dried at lower temperatures —saving Carotene and Vitamin A

Check These Advantages!

1. Material is properly and uniformly prepared before dehydrating.
2. Dryer capacity increased 50% or more.
3. Fuel consumption per dry ton reduced.
4. Material dried at much lower temperature.
5. Green plant pigments impregnated into white stem fibers for better uniform color.
6. Product exposed to drying medium for shorter time.
7. Stems progress through dryer more in suspension.
8. Product can be cooled and shipped without spoiling.
9. Stems dry nearly as fast as leaves.
10. Pelleted direct from dryer, eliminating grinding and dust.

Order Now—for Next Year's Production

For Prices and Further Details Contact

U. S. ALFALFA PRODUCTS CO.

VERDON, NEBRASKA

P. O. Box A Phone 2191 or 2131

1952 Trends in Alfalfa Dehydrating

By Loyd M. Faris

W. J. Small Co., Division of Archer-Daniels-Midland Co., Kansas City
President, American Dehydrators Assn.

IT has been said that "variety's the very spice of life." Those engaged in the processing of alfalfa can attest to a full share of variety in their lives. For no two years are alike in the alfalfa dehydrating industry. And, of course, the 1952 production season followed a pattern unlike any that has been experienced in the past.

The devastating flood of 1951 in the Kaw and Missouri River valleys were replaced this year by the most severe drouth in weather bureau history. Many mills located in Kansas and Oklahoma have been closed since late in July while others have operated only part time. Production in Ohio and Texas has also been curtailed as a result of drouth.

The drouth conditions have continued through October and are a serious threat to next year's production. Most of the newly seeded acreage has been lost. The extent of the damage to older stands can't be gauged, of course, until next spring.

Loyd M. Faris

Competition for Supplies

Many sections with a normal surplus of alfalfa have had to look elsewhere for supplies. This brought competition to dehydrators in those areas where alfalfa was available. As a result of this competition it was necessary for the dehydrating industry to pay the highest price in history for raw material—a price that was not justified by either the market or existing contracts.

Since the alfalfa dehydrator is unable to hedge his raw material in a futures market, he is subjected to hazards of advancing costs not experienced by other ingredient suppliers.

The activities of the American Dehydrators Assn. during 1952 have set new marks in our ever-forward progress. We have established an all-time membership record.

We have sponsored a Dehydrators Production Conference at Manhattan, Kansas, and one at Lincoln, Neb. There was an attendance of 175 men at each of these meetings. These production schools are designed to bring the latest innovations as well as an exchange of ideas on dehydration to the industry to the end that a better product may be manufactured at the lowest possible price.

The popularity of these sessions induced us to plan others for the future. If these endeavors will result in increasing efficiency and improving quality, then we are rendering a worthwhile service to our membership and the formula feed industry.

I have had the pleasure of attending meetings of the dehydrators in Texas, California, Kansas and Nebraska. Lloyd Larson, our secretary, together with Joe Chrisman, represented the association at a meeting of the Washington and Canadian members in Seattle.

Dehydrators in every region have their own problems. The association is always ready to hold regional meetings so that we may broaden our scope of appreciation of the various sectional problems.

Research Extensive

More than $100,000 has been expended on various research projects. Some of the progress reports appear in this publication, and a complete review will be made at the January convention in Phoenix.

The Trade Rules book, including a 1952 membership directory, has recently been published and distributed to 5,000 feed manufacturers.

On Oct. 1 we were hosts at a luncheon for Dr. Forrest W. Quackenbush, a member of the Alfalfa Research Council and president of the Association of American Feed Control Officials; Leslie E. Bopst, secretary-treasurer of that association, and Dr. W. Dayton Maclay, Western Regional Research Laboratory, Albany, Cal., chairman of the Alfalfa Research Council. That evening a meeting was held with a number of officials of the U.S. Department of Agriculture who have an interest in the alfalfa dehydration industry.

Ceiling price regulations were established for our products on Nov. 1. Twenty months have elapsed since the first committee meeting on this subject. The association sincerely appreciates the time and effort expended by the committee, with special recognition to Joseph Chrisman and R. E. Nye.

Our weekly bulletin has been the object of many favorable remarks. I know that Lloyd Larson, our secretary, gives this publication his close personal attention and is sincerely desirous of compiling data that is worthwhile to every dehydrator.

Advertising Placed

The association is advertising on a national scale the value of the products of its members. A listing of the active members appears in these advertisements.

Dr. W. Dayton Maclay edits the Research News bi-monthly. We know that it is well read and appreciated from the many favorable comments received.

Abstracts of current literature relating to the production, harvesting, composition and uses of alfalfa meal are published and distributed several times each year.

Plans for the future include a booklet on the values of dehydrated alfalfa in rations for ruminants; and a motion picture film devised to promote knowledge and use of dehydrated alfalfa. A good beginning has been made on this project and I believe that a dramatic and interesting presentation of our product will be accomplished.

Credit for the advancement made during the past year is not claimed by the present officers and board members. These achievements have been made possible through the efforts of all of those participating in the affairs of the association since its inception.

Our population is growing at the rate of something over 1% per year. This means a continued increase in the demand for meat, milk and eggs. The best efforts of the feed industry will be required in order that the dietary standard in America can be maintained with increasing numbers of people.

We in the alfalfa industry, as producers of an important ingredient for the formula feed manufacturers, pledge ourselves to a continued improvement of our product to the end that we may perform the utmost in service to an ever greater America.

1952 BOARD OF DIRECTORS, AMERICAN DEHYDRATORS ASSN.—Left to right, Henry G. Moeller, first vice president, American Dehydrators Assn., Sioux Alfalfa Meal Co., Vermillion, S.D.; Jerry W. Fielder, second vice president, American Dehydrators Assn., Dixon Dryer Co., Dixon, Cal.; Joseph Chrisman, chairman ADA research committee, Cerophyl Laboratories, Inc., Kansas City; J. D. Pharo, Keystone Dehydrating Co., Nazareth, Pa.; Vernon C. Britton, V. C. Britton Co., Firebaugh, Cal.; J. D. Cole, Cole Grain Co., Muskogee, Okla.; Earl M. Saul, Red River Alfalfa Co., Crookston, Minn.; Miss Adelle Eresch, Kansas City; Lloyd Larson, executive secretary, American Dehydrators Assn., Kansas City; Loyd M. Faris, president, American Dehydrators Assn., The W. J. Small Co., Division Archer-Daniels-Midland Co., Kansas City; J. C. Hearn, National Alfalfa Dehydrating & Milling Co., Lamar, Colo.; Ralph I. Brown, The Ark Valley Alfalfa Mills, Hutchinson, Kansas; Marvin Rohloff, Rohloff Brothers, Inc., Grayton, Ohio; R. L. Robertson, Platte Valley Products, Inc., Lexington, Neb.; Frank Higgins, F. J. Higgins Milling Co., Schuyler, Neb.; L. J. Cousino, Erie Alfalfa Mills, Inc., Erie, Mich., and C. A. Schmoker, Greenbelt Dehydrating Co., Vernon, Texas. Absent from the picture is C. W. Scheurer, Grayson Alfalfa Dehydrating Mills, Sherman, Texas.

Alfalfa Pioneers Waxed Eloquent

The products of the alfalfa plant have never lacked for colorful and effective promotion. Stirred by the grandeur of the vast open spaces where their product was grown, alfalfa pioneers frequently waxed eloquent in extolling its virtues.

F. D. Coburn, former secretary of the Kansas State Board of Agriculture, states in his book on alfalfa: "Alfalfa is the oldest plant known to man. The alfalfa plant furnishes the protein to construct and repair the brains of statesmen. It builds up the muscles and bones of the war-horse, and gives his rider sinews of iron. Alfalfa makes the hens cackle and the turkeys gobble. It induces the pigs to squeal and grunt with satisfaction. It causes the contented cow to give pailfuls of creamy milk, and the shorthorn and whitefaced steers to bawl for the feed rack. Alfalfa softens the disposition of the colt and hardens his bones and muscles. It fattens lambs as no other feed, and promotes a wool clip that is a veritable golden fleece.

"The homes surrounded by fields of alfalfa have an esthetic advantage unknown to those where the plant is not grown. The alfalfa meadow is clothed with purple and green, and exhales fragrant, balmy odors throughout the growing season to be wafted by the breezes into the adjacent farmhouses." — From "The Golden Anniversary of Scientific Feeding" by Larry Wherry.

GRAIN SANITATION GROUP PLANS RODENT CAMPAIGN

WALLA WALLA, WASH. — Arrangements are being made for a joint meeting of country grain elevator operators and commercial pest control specialists to develop standards of operation and fix responsibilities between storage operators and pest control men to effect more efficient rodent and bird control.

The joint meeting will be held under the auspices of the Pacific Northwest Grain Sanitation Committee and will be held some time during November. Robert O. Fletcher, secretary of the association, said that notices will be sent out when arrangements are completed.

The committee held a meeting in Walla Walla recently and it was agreed that rodent and bird control around country elevators was the major problem in the area.

The meeting was attended by 35 representatives of the milling and grain trades, staff members from the four state colleges in the region and commercial pest control operators.

It was agreed that actual cleanup of farm grain storage facilities has been generally disappointing and it was the opinion of the committee that real progress will not be made until the Food & Drug Administration begins to take positive action through enforcement in the region to provide more incentive to operators.

ALFALFA MILL BURNS

BURWELL, NEB.—The Loup Valley Alfalfa Mill here was badly damaged by fire of undetermined origin. A large amount of sacked alfalfa was destroyed and machinery in the plant was damaged extensively.

New Kansas State Bulletin Ready on Dehydrated Alfalfa

MANHATTAN, KANSAS — Research workers at the Kansas Agricultural Experiment Station in Manhattan have recently completed a manuscript for a new bulletin entitled "Dehydrated Alfalfa."

The writing of the new bulletin has been the joint effort of W. G. Schrenk, Ralph E. Silker and H. L. Mitchell of the department of chemistry, W. H. Honstead and R. G. Taecker of the department of chemical engineering, and C. O. Grandfield, agronomist for the United States Department of Agriculture who is stationed in Manhattan.

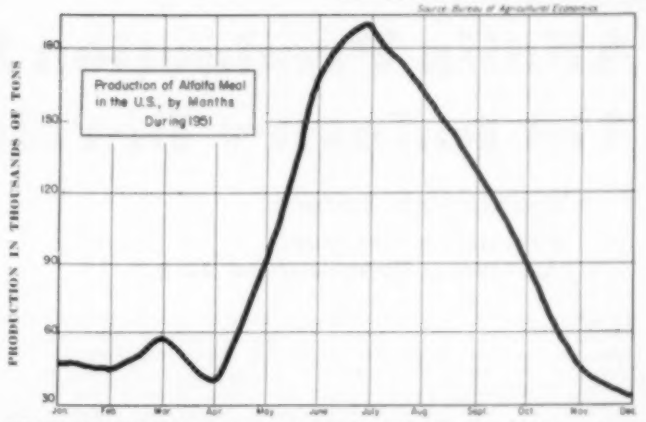
Topics covered include breeding alfalfa for dehydration, production of dehydrated alfalfa, engineering research, stabilization of carotene, composition of dehydrated alfalfa and analytical problems associated with the industry. Numerous references to published literature are given.

The bulletin contains considerable data from research projects carried out at Kansas State College, but considerable information of a general nature is included. Published results of research done elsewhere also are given considerable attention in an effort to present as complete a story of dehydrated alfalfa as could be done under the limitations imposed by presenting the material in bulletin form.

Copies will be available for distribution as soon as they are received from the printer. The American Dehydrators Assn. will make a number of copies available for distribution from its offices. Other copies may be secured when available by directing requests to the Agricultural Experiment Station, Manhattan, Kansas.

VITAMIN A NECESSARY

Unless rations of pastured animals are supplemented with Vitamin A rich feeds, respiratory troubles will increase as changes in the weather become more sudden, reports an agricultural notes bulletin. If the lack of rainfall prevents the growing of winter grazing crops, green hay or vitamin A-enriched concentrates must be supplied. In addition to bronchitis and pneumonia prevention, vitamin A also plays a very important role in animal production.



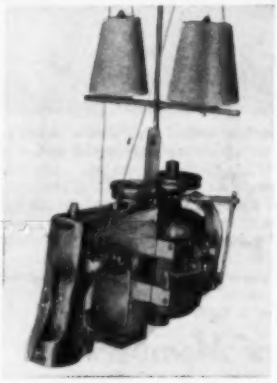
SEASONAL TRENDS—Seasonal trends in production of alfalfa meal are clearly apparent in this graph of monthly production of dehydrated product during 1951, as reported by the U.S. Department of Agriculture. June, July and August are the biggest producing months.

BRUCO SUPERIOR PEAT MOSS

TOP QUALITY Canadian and European

WRITE: BRUCO PEAT MOSS CORP. 11 W. 42nd St., New York 18, N. Y.

BAG CLOSERS



M-100 HEAVY DUTY SUSPENDED MODEL

Sews cloth, paper, multi-wall bags. Largely used by alfalfa meal dehydrators.

PORTABLE MODEL H-150

For information on these and other heavy duty, portable, stationary and conveyor models of bag closing sewing machines, write Dept. F.

Minneapolis Sewing Machine Co.
4865 Osseo Road
Minneapolis 12, Minnesota

ONLY HUDSON GUARANTEES TO REPLACE MULTIWALL SACKS DAMAGED ON YOUR PACKER

Exceptional quality of Hudson Multiwall Sacks permits unusual guarantee

PALATKA, FLA. Heretofore each Multiwall Sack user has individually absorbed the cost of any sacks which break on his filling and closing machines. But now, Hudson becomes the first and only Multiwall Sack manufacturer to guarantee to replace such broken sacks at no further cost.

According to experts, the average user of Multiwall Sacks normally expects to write off the loss of certain sacks during each day's run. These sacks are damaged due to circumstances beyond control of the Multiwall Sack manufacturer. Overloading of sacks, malfunction of packing or closing machines, or inattention on the part of the operator are some of the common causes of sack breakage.

Hudson is confident that the quality of the Multiwall Sacks they produce can eliminate most of this breakage. That is why they are willing to offer you complete protection through filling and closing operations. Only a company with a superior product would dare offer their customers such a guarantee.

First in industry to offer this replacement guarantee

T. H. Mittendorf

NEW YORK CITY. "Hudson is the first and only Multiwall Sack manufacturer to offer a written replacement guarantee on breakage of Multiwall Sacks," declared T. H. Mittendorf, Hudson's Vice President in Charge of Sales. "Hudson Multiwall Sacks lead the industry as being the world's most fully guaranteed. We believe they represent the best buy on today's market."

"Under the terms of our unusual guarantee the buyer is protected from the moment he accepts custody of the sacks until the sacks have successfully passed his filling and closing operations. This guarantee greatly extends our usual warranty of quality and workmanship," Mr. Mittendorf pointed out.

Goes into immediate effect

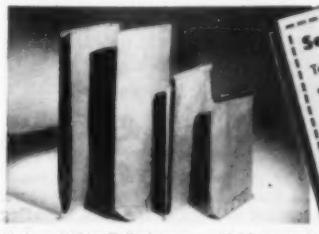
The new Hudson guarantee plan went into effect with all sacks purchased on or after Sept. 15, 1952. Early reports indicate that the guarantee is being enthusiastically received.

Prompt delivery on all contracts are assured by the tremendous capacity of Hudson's fully integrated mill at Palatka, Fla. High quality is maintained through inspection and controls at every step from tree to the finished Hudson Multiwall Sack. Hudson packaging engineers see that sacks conform to the exact needs of each user.

Hudson Representative, Harry Rafferty (center), points out the packing and closing operations covered by Hudson's new guarantee, to J. Dummett (left), Plant Supt. for Wedron Silica Company.

Urge Multiwall Sack users to write for facts

The Hudson Pulp & Paper Corp. invites all users of Multi[illegible]ks to learn how th[illegible]y by usi[illegible]wall



Hudson Multiwall Sacks are available pasted or sewn, and in valve and open mouth styles.

Send for full details!
Tell me, without obligation, about the many advantages of your new Multiwall guarantee.
NAME
COMPANY
STREET
ZONE STATE
CITY
[illegible], and
[illegible]y are promised!

Hudson Pulp & Paper Corp.
Dept. 172, 505 Park Ave., New York 22, N. Y.

Alfalfa Production Schools Aid Industry Development

● By Lloyd S. Larson

Executive Secretary
American Dehydrators Assn.

Lloyd S. Larson

REALIZING the need for a consistent program of improving alfalfa meal quality and efficiency of production, the American Dehydrators Assn. this year for the first time sponsored two industry-wide production schools. The third will be held at Kansas State College, Manhattan, Feb. 27-28, 1953.

The first production school also was held at Manhattan early this year. It was the first time the industry every assembled to discuss thoroughly and exclusively problems of production. Response to the school was excellent, and attendance exceeded expectations. Industry representatives came from 13 states to attend the school, and 174 persons were registered. Many plant owners and managers brought their operating staffs along to gain benefits of the meeting. A panel of 18 experts covered all phases of production, from field to the finished product.

Because of further demand for another school, a second was held in Lincoln, Neb., last spring. One-hundred-seventy-six persons representing 34 firms in nine states attended this conference.

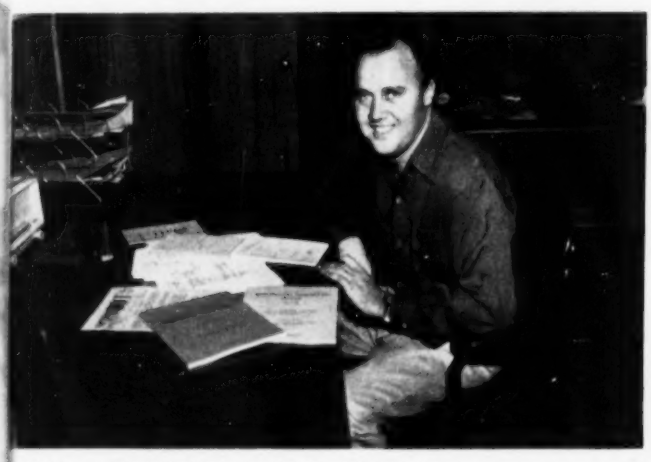
Loyd Faris, president of the ADA, in commenting on the value of these schools stated, "We have a long way to go in perfecting technique and procedure, to continually improve quality, uniformity, and to reduce costs. It is a requisite if we are to be competitive in the rapid parade of progress that is being made in the field of nutrition today."

Commenting further Mr. Faris declared that employees share in the responsibility of doing a better job of dehydration. "The first step is to learn all you can about the job," he said, "then actually apply what you learn the best way you know how."

Arrangements for the next Manhattan school are being worked out by an industry committee headed by Ray Bert, Bert & Wetta, Maize, Kansas.

Topics which have been discussed at past schools include efficient harvesting and maintenance, operational procedure of drying equipment, dryer maintenance, grinding machinery maintenance, bulk handling, temperature control and control maintenance, cooling alfalfa meal, pelleting, packaging and scale operations, dust collection and sanitation. Further progress in these operations plus several other phases will be on the program of the school next February.

Carrying the idea of the production school to a further degree, the ADA anticipates sponsorship of studies and projects in engineering development which will benefit the industry as a whole.



ALFALFA PRODUCTION SCHOOL CHAIRMAN—Ray Bert (above) of Bert & Wetta, Maize, Kansas, is the chairman of the committee on arrangements for the alfalfa production school which is scheduled for Feb. 27-28 at Kansas State College in Manhattan under the sponsorship of the American Dehydrators Assn. Mr. Bert has been a speaker at previous ADA-sponsored alfalfa production schools, discussing primarily problems in alfalfa harvesting.

DRYER PANEL—At the first ADA production school the above industry representatives participated in a discussion on operation and maintenance of drying equipment. They are (left to right): W. L. McGehee, the McGehee Co., Kansas City; Henry French, the Arnold division of the Heil Co., Milwaukee; Harlow Schmitt, Barton Mills, Inc., Omaha, and Gordon J. Lindl, also of the Heil Co. The moderator at the right is Loren V. Burns, Kansas State College, Manhattan, where the school was held last February.

THE PATIO POOL—At Jokake Inn, one of the four ADA convention resort inns, is the above pool which awaits the leisure hours of convention-goers. All types of recreational facilities are provided at each of the inns, including the Casablanca, the Royal Palms and Paradise Inn. They all are located in the Valley of the Sun about 10 miles east of Phoenix.

Phoenix First Choice of Members as ADA 1953 Convention Location

KANSAS CITY — Continuing its policy of employing a membership vote to assist in determining the location of the annual convention, the American Dehydrators Assn. selected Phoenix, Ariz., for the site of its 11th meeting. Thus ADA convention-goers will again be able to go South in the winter to attend the Jan. 11-14 sessions.

Shortly after last year's convention in St. Petersburg, Fla., each member received a ballot from the ADA headquarters listing several possible locations for the 1953 meeting. The overwhelming choice was Phoenix, one of the most popular winter resorts in the country.

ADA plans include the use of four resort inns located within a two-mile area close to Phoenix. The headquarters hotel is the Paradise Inn, and the others are the Casablanca, Royal Palms and Jokake Inns. A new meeting room is under construction at the Paradise Inn, and the ADA will be the first group to use it after completion.

This group of resort inns is situated about 10 miles east of Phoenix at the foot of the famous Camelback mountain. Limousine service will be provided for transportation between the outlying inns and the Paradise.

Each of these resorts is similar in construction. They consist of a group of main buildings and numerous cottages surrounding. Facilities for tennis, swimming and other sports are provided. Golf and horseback riding are other popular pastimes. Nearby Scottsdale, Ariz., contains a unique shopping area which is comparable to those in any metropolitan area.

The association was able to book these resorts, which are among the most exclusive in the state, because the convention dates just precede the official winter season. This year's convention will provide a well-balanced program of business and pleasure for the entire family, Lloyd S. Larson, ADA secretary, declared.

Record Alfalfa Seed Harvest Seen by USDA

WASHINGTON—With a yield per acre of alfalfa seed in prospect the largest in 25 years and an acreage only 8% below the record of 1946, this year's alfalfa seed production is expected to be the largest ever harvested in the U.S., the U.S. Department of Agriculture reports.

The forecast is for 146,900,000 lb. of clean seed, 40% larger than last year's crop of 104,630,000 lb. and 91% above the 1941-50 average of 76,884,000 lb.

Larger crops this year than last are indicated for 14 out of the 20 producing states. Increases are largest in Nebraska, Kansas, and South Dakota, but a large increase is indicated also for California, where more than a fourth of the total U.S. crop is being produced this year. Of the five states with smaller prospective crops, sharpest reductions are indicated in Minnesota and Arizona.

Drouth Influence

It was estimated that at least 1,089,500 acres of alfalfa seed would be harvested. This is 22% larger than the 889,500 acres harvested in 1951 and also 22% above the 10-year average of 891,960 acres. Largest acreage increases occurred in Kansas and Nebraska, where about three times as many acres as in 1951 were harvested. Drouth in the heavy producing sections of those states and of several other states during the summer caused growth of alfalfa plants to be so short as to make hay production, even at high prices, less profitable than seed production. However, in a number of other states short supplies of hay and relatively higher prices for hay than for seed tended to curtail the acreage harvested for seed in those states.

Applications for the certification of 202,003 acres of alfalfa seed in 19 states were made this year. This is an increase of 36% over the acreage covered by applications last year at a corresponding time. Varieties in the number of acres for which certification was requested are Ranger with 110,370 acres, Buffalo with 30,893, Ladack with 25,872, Grimm with 17,627 and Atlantic with 4,218 acres.

Harvest Weather Good

This was a good year for alfalfa seed in most producing sections, and weather at harvest was most favorable to nearly ideal. A yield of 135 pounds of clean seed per acre is expected. This compares with the 1951 yield of 118 lb. and the average of 86 lb.

Harvesting of alfalfa seed this year began on the average seven days earlier than last year and six days earlier than usual.

The current supply of alfalfa seed, including estimated production this year and carryover, is 172,367,000 lb. of clean seed. This is 29% larger than in 1951 and nearly twice the 1941-50 average.

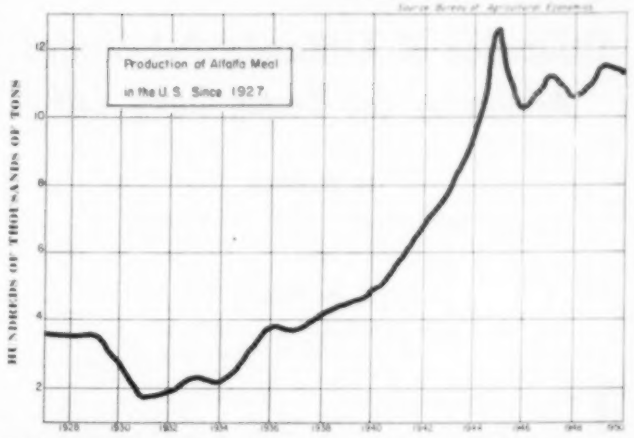
Indicated 1952 production in the top seed-producing states is as follows (in pounds, 000's omitted): California 38,600, Washington 17,300, Kansas 14,400, Nebraska 12,700, Oklahoma 9,200, Utah 9,000, South Dakota 7,900, Montana 7,400, Idaho 6,900, Arizona 6,300, Texas 3,400.

ADA TRADE RULES BOOK AVAILABLE TO INDUSTRY

One of the most important projects undertaken by the American Dehydrators Assn. this year has been the issuance of the ADA Trade Rules book. The book contains the ADA constitution, code of ethics and directories of active and associate members.

The edition includes revisions and amendments to the constitution and code adopted at the last business meeting. Other sections in the book provide a brief review of research projects currently supported by the ADA and a listing of members of the Alfalfa Research Council.

Free copies may be obtained by writing the association headquarters at 1015 Dwight Bldg., Kansas City, Mo.



UPWARD TREND—This graph of alfalfa meal production—both suncured and dehydrated—shows the steady upward trend in production of these feed products since the depression days of the early "thirties." Although production dropped sharply in 1946 after reaching an all time peak in 1945, the trend since that time has been irregularly upward. Unusual weather has resulted in some abnormal production swings in the past few years. Market observers believe that alfalfa meal production will continue to match the rise in formula feed business.

UNIFORM QUALITY

DUST TITE BAGS
ABILENE ALFALFA SALES CO.
ABILENE, KANSAS

ARROW and NAMSCO
EUROPEAN and CANADIAN
PEAT MOSS
New Amsterdam Import Co., Inc.
122C Chambers St., New York, U.S.A.

For Alfalfa Meal with a
Good REPUTATION
IT TAKES—

1—Top Quality Raw Products
2—Modern, Complete Equipment
3—Constant Laboratory Control
4—Experienced, Efficient Employees Who Have Contributed Many Years of Loyal Service
5—A Never-Ending Search for Improvement of Our Product Through Equipment and Research

PLATTE VALLEY SALES SERVICE
402 GRAIN EXCHANGE Phone HArney 8844 Teletype OM 191 OMAHA, NEBRASKA

B. D. SUPER
Platte Valley Sales Service
OMAHA, NEBRASKA

Member American Dehydrators Association

R. L. (Pat) ROBERTSON
Platte Valley Products, Inc.
LEXINGTON, NEBRASKA

Utilization of Artificially-Dehydrated Alfalfa by the Young Dairy Calf

By

H. D. Eaton

Storrs Agricultural Experiment Station

and

R. A. Moore

Bureau of Dairy Industry
U.S. Department of Agriculture

THE quality of field-cured hay produced in some of the more humid areas of the U.S. is usually inferior. For instance, a survey in New Jersey by the Department of Agriculture during the years 1948, 1949 and 1950 showed that on the average only 14% of the alfalfa hay produced was equal in quality to the U.S. No. 1 grade.

From birth to about four months of age is the most critical in the rearing of calves since most of the losses occur during this period. In order to insure good growth and development of the young calf, it should be fed the best quality of forage available. This is especially so where limited whole milk—limited dry calf starter systems of feeding are practiced. For under such systems unless quality roughage is fed there is a period between birth and four months of age, when there is insufficient carotene intake to meet the calf's requirement. A series of investigations was begun in the fall of 1949 to study the value of artificially dehydrated alfalfa as a source of roughage and carotene for the young dairy calf.

TABLE 1

Form of alfalfa—	Dry matter %	Per cent of dry matter: Crude protein	Ether extract	Crude fiber	N.F.E.	Ash	Carotene mg./lb.
Field-cured and field-baled	88.52	21.13	1.64	29.85	37.01	10.37	3.59
Artificially-dried and ground	91.96	19.57	2.47	28.81	38.83	10.32	39.09
Artificially-dried and pelleted	89.60	20.74	3.23	25.96	39.83	10.18	53.08

PARKER SHIRLING

HARRY M. LIGGETT CO.

INCORPORATED

Manufacturers of Dehydrated and Suncured Alfalfa Meal Sweet Cane Meal

CONCORDIA, KANSAS • PHONE 1239

TABLE 2

Form of alfalfa fed	Feed consumed: Starter	Feed consumed: Alfalfa	Liveweight: At 7 days (pounds)	Liveweight: At 105 days (pounds)	Liveweight: Increase	Average* vitamin A stores weeks
Field-cured and field-baled	244.6	224.0	96.2	237.2	141.0	4.8
Artificially-dried and ground	243.8	196.4	102.4	238.2	135.8	8.2
Artificially-dried and pelleted	245.8	323.8	97.4	273.8	176.4	11.2

*Estimated by feeding a carotene-free ration from the 105th day of age until the plasma vitamin A level for each calf decreased to less than 4.0%.

Field Cured Baled, Dehydrated Ground and Dehydrated Pelleted Fed Free Choice

A field of alfalfa, in one-quarter bloom, was divided into plots and processed in three different ways: (1) field-curing and field-baling, (2) artificial-drying and grinding and (3) artificial-drying, grinding and pelleting. The average chemical analyses during the feeding period of October 1949 through February 1950 are shown in Table 1.

Each of these three forms of alfalfa was fed free choice to three sets of five Holstein calves from the 8th through the 105th day of age. In addition, each calf was fed limited amounts of whole milk to 35 days of age and allowed up to 3 lb. per day of a standard starter. Results of this experiment are shown in Table 2.

In the fall of 1950, alfalfa estimated to be in initial bloom was processed as in the previous experiment except that grinding after dehydration was omitted, because of the unpalatability of the ground material as demonstrated in the previous experiment. Holstein calves were fed ¾" diameter pellets and Guernsey calves received ¼" diameter pellets. The average composition of alfalfa during the feeding period October 1950 through March 1951 is shown in Table 3.

Each of these forms of alfalfa was fed free choice to three Guernsey and three Holstein male calves as described above for the previous experiment. Results of this experiment are shown in Table 4.

A summarization of these two experiments indicated the following:

Guernsey and Holstein calves consume greater amounts of alfalfa when fed as dehydrated pellets or dehydrated chopped than fed as field-cured and field-baled. Largely because of this higher consumption, calves grow faster on the dehydrated hay than on the field-cured hay. Further, calculation of the weekly carotene intake per pound of body weight (data not shown) from 7 through 105 days of age indicated ample intake according to the National Research Council's Recommended allowance of 60γ of carotene per pound liveweight per day when the dehydrated forms of alfalfa were fed. In contrast the field-cured and field-baled alfalfa did not provide sufficient carotene until the calves reached 56 days of age.

Dehydrated Alfalfa Incorporated in Calf Starters

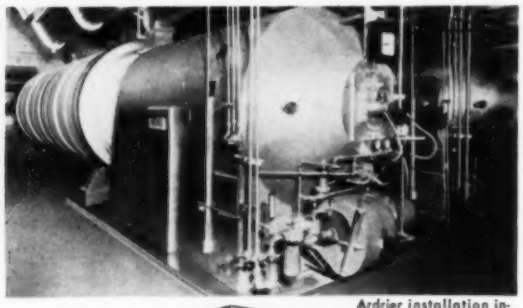
In the fall of 1950 a series of three experiments was initiated to explore the feasibility of incorporating starter and artificially dehydrated alfalfa into a complete ration for the young dairy calf. Alfalfa was added to insure adequate carotene and roughage intake. A comparison was made using

Cut your costs for drying forage crops, citrus peel, fish meal, industrial by-products!

. . . Save vitamins and nutrients!

Do it by "flash" drying with

ARDRIER DEHYDRATORS



Ardrier installation indoors. Ardrier requires less space per ton of evaporation capacity than any other machine.

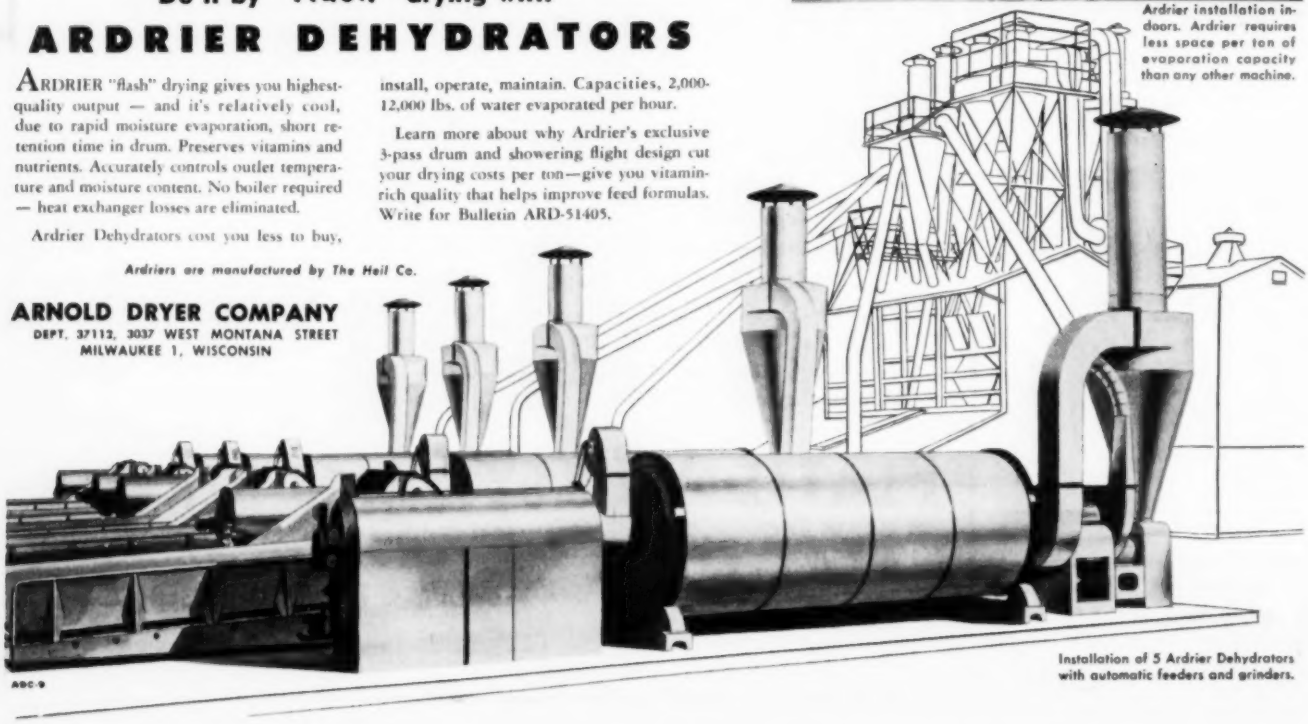
ARDRIER "flash" drying gives you highest-quality output — and it's relatively cool, due to rapid moisture evaporation, short retention time in drum. Preserves vitamins and nutrients. Accurately controls outlet temperature and moisture content. No boiler required — heat exchanger losses are eliminated.

Ardrier Dehydrators cost you less to buy, install, operate, maintain. Capacities, 2,000-12,000 lbs. of water evaporated per hour.

Learn more about why Ardrier's exclusive 3-pass drum and showering flight design cut your drying costs per ton—give you vitamin-rich quality that helps improve feed formulas. Write for Bulletin ARD-51405.

Ardriers are manufactured by The Heil Co.

ARNOLD DRYER COMPANY
DEPT. 37112, 3037 WEST MONTANA STREET
MILWAUKEE 1, WISCONSIN



Installation of 5 Ardrier Dehydrators with automatic feeders and grinders.

ADC-9

four rations: (1) standard ration consisting of limited starter and free choice field-cured and field-baled hay, (2) 25% alfalfa ration consisting of 25% artificially-dehydrated alfalfa meal and 75% starter fed free choice, (3) 50% alfalfa ration consisting of 50% alfalfa and 50% starter fed free choice and (4) 75% alfalfa ration consisting of 74% alfalfa meal and 26% starter fed free choice. Artificially-dehydrated alfalfa meal (purchased on the open market) with the other fine ingredients from the starter were pelleted into ¼" diameter pellets and the remaining coarse material such as the corn and the oats mixed with the pelleted portion. The average chemical composition of these rations during the feeding period is shown in Table 5.

Each of these four rations was fed from 7 through 105 days of age to eight calves, consisting of two male and two female calves of the Guernsey breed and a similar grouping of the Holstein breed, or a total of 32 calves in all. As in the previous experiments limited milk was allowed up to 35 days of age. The results of this experiment are shown in Table 6.

Average number of weeks in which the carotene intake was less than 60γ per pound body weight per day per calf was for the standard ration 0.5 week, for the 25% alfalfa ration 0.7 week, for the 50% alfalfa ration 0.2 week and for the 75% alfalfa ration 0.0 week.

Since it appeared from the initial experiment of this phase of the work that the very young calf could not handle large quantities of roughage, the possibility of beginning with lower levels of alfalfa and increasing the level each week was explored in a preliminary trial in the summer of 1951. In this trial also the possibility of using mixtures of alfalfa pellets and starter pellets was attempted instead of incorporating the alfalfa meal with the starter into one pellet as was done previously. The latter was found to create a dust hazard under eastern milling conditions as well as cause considerable stress on the pellet mill available. Therefore mixtures of ¼" alfalfa pellets and ¼" starter pellets were fed at levels of 10 and 40% alfalfa or starting with their initial levels and increasing to 43 and 83% respectively at nine weeks of age. Although the growth data was inconclusive, analysis of the mixture as fed as well as that refused by individual calves indicated that the Holstein calf was unable to select one type of pellet when alfalfa pellet-starter pellet mixtures were fed.

Therefore in the fall of 1951, an extensive experiment was undertaken in which various initial levels of alfalfa as well as weekly rates of increase were explored utilizing mixtures of alfalfa pellets and starter pellets. The scheme followed was to feed each of four initial levels 10, 15, 20, and 25% alfalfa mixtures to three 8-day-old Holstein male calves. One calf in each set of three received the same initial level of alfalfa throughout the experimental period from 8 through 91 days of age.

The second calf's mixture was increased by multiplying the parts of alfalfa fed during the previous week by 1.1747 and holding the parts of starter constant. For example, consider the 10% alfalfa mixture fed the first week; this contained 1 part alfalfa to 9 parts starter. Multiplying the 1 part alfalfa by the factor 1.1747 gave 1.17 parts alfalfa to 9 parts starter and when expressed as a percentage was 11.5%. This was the percentage fed the second week to the second calf. The parts of alfalfa in the second week's mixture, 1.17, were again multiplied by 1.1747 which gave 1.37 parts alfalfa to 9 parts starter and expressed as a percentage was 13.2%. This procedure was repeated weekly for the twelve experimental weeks.

The third calf's mixture was increased by multiplying the parts of alfalfa fed during the previous week by 1.3494 and holding the parts of starter constant. The initial levels of alfalfa to include in the mixtures as well as the factors to use in increasing the weekly level of alfalfa were based on previous experience and included up to a maximum of 90% of alfalfa.

The results of this experiment for 32 Holstein calves from 8 through 91 days of age are shown in Table 7.

Even more significant than the data

TABLE 3

Form of alfalfa—	Dry matter %	Per cent of dry matter— Crude protein	Ether extract	Crude fiber	N.F.E.	Ash	Carotene mg./lb.
Field-cured and field-baled	89.45	18.63	1.75	31.38	37.77	10.56	7.76
Artificially-dried and chopped	90.99	21.28	3.01	26.70	37.62	11.39	44.48
Artificially-dried and pelleted:							
¼ in.	91.55	19.59	3.66	27.08	37.50	12.16	45.48
⅜ in.	92.04	20.54	3.45	26.07	38.60	11.33	46.04

TABLE 4

Form of alfalfa fed	Feed consumed— Starter	Alfalfa	Liveweight— At 7 days	At 105 days	Increase	Average vitamin A stores weeks
	pounds					
Field-cured and field-baled:						
Guernseys	194.3	125.9	74	178	104	6.7
Holsteins	237.6	167.8	96	233	129	7.0
Artificially-dried and chopped:						
Guernseys	188.8	133.4	73	188	115	10.6
Holsteins	234.9	230.2	93	250	157	8.7
Artificially-dried and pelleted:						
Guernseys	193.4	140.3	71	181	110	6.3
Holsteins	169.8	235.2	108	260	152	9.0

MOVING?

If you are moving, tell us about it, won't you? Your weekly copy of Feedstuffs will not follow you unless we have your new address right away. Make sure you don't miss a single important issue . . . and help us make the correction as quickly as possible by giving us your old address too.

FEEDSTUFFS

118 S. 6th St., Minneapolis 2, Minn.

TWO GREAT PRODUCTS for the ALFALFA INDUSTRY

BOILERS TO PUT *STEAM* TO YOUR PELLETS

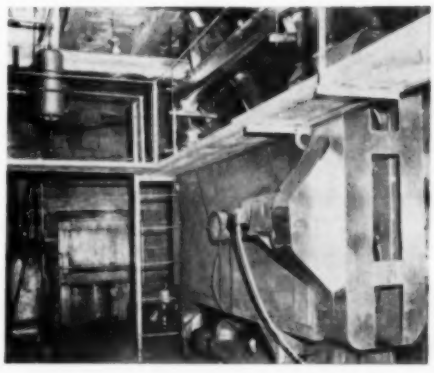
HERE is the N-B Series 30 Water Tube Boiler (right). It's compact, safe, dependable. It's quick-steaming—operates with maximum efficiency—low in cost to maintain. Size range—30 Series, 10 to 30 H.P.; 20 Series, 35 to 300 H.P. Fired by gas, oil or stoker. Construction—in accordance with ASME "Power Boiler Code." Operating pressures—from 30 to 125 lbs. Installation—simply connect to existing facilities. Completely automatic. Send for specifications and prices.

Nebraska NB Boiler

Reg. U. S. Pat. Off.

Mr. Feed Manufacturer:
Make your replacement boiler an N-B Boiler.

COOLERS TO *COOL DOWN* MEAL QUICKLY



GREATER profits are yours with an N-B Cooler. Your alfalfa meal—when cooled—will hold its carotene content longer. Cooled alfalfa meal will retain its fresh, green color. Cooled meal means better working conditions in your sacking room. The N-B Cooler is inexpensive to operate and maintain. Refrigerant or water can be used as a coolant. Dimensions—length 12 ft. 4 in., height 7 ft. 4 in., width 36¼ in. Weight—4,000 lbs. Send for specifications and prices. (Left—actual installation of N-B Model A-4 cooler in plant of Platte Valley Products Co., Lexington, Neb.)

Nebraska NB Cooler

THE NEBRASKA BOILER & SUPPLY CO.

235 N. 9th Street Lincoln 8, Nebraska

25 Years of Boiler Manufacturing

in the table was the calculation by regression methods of the initial levels of alfalfa and the weekly rates of increase for the parts of alfalfa which would give maximum response to the various criteria measured. For example, maximum feed consumption was calculated to occur at an initial level of alfalfa of 18.3% and at a weekly rate of increase of parts of alfalfa of 1.2149. Similar values for digestible energy efficiency and live weight increase were 18.1 and 17.0 and 1.2336 and 1.1817, respectively. For maximum growth this would mean that from the second week of age through the thirteenth week the following percentages of alfalfa should be included in the Holstein male calf's ration of alfalfa pellets and starter pellets: 17, 19, 22, 25, 28, 32, 36, 40, 44, 48, 52 and 56% respectively.

TABLE 5

Rations—	Dry matter %	Per cent of dry matter: Crude protein	Ether extract	Crude fiber	N.F.E.	Ash	Carotene mg./lb.
Standard: Field-cured and field-baled alfalfa	89.43	18.63	1.75	31.28	37.77	10.56	7.66
Starter	88.37	21.95	4.98	7.64	59.97	6.35	3.76
25% alfalfa	89.38	22.67	3.92	10.73	55.70	6.97	19.22
50% alfalfa	89.76	22.39	4.19	15.14	50.72	7.65	20.40
75% alfalfa	90.80	21.95	4.16	19.69	45.67	8.52	35.20

TABLE 6

Ration—	Field consumed lb.	Digestible energy efficiency %	Liveweight: At 7 days	At 105 days	Increase	Average vitamin A stores weeks
			pounds			
Standard	374	50.2	84	213	129	6.6
25% alfalfa	429	47.2	82	232	150	7.5
50% alfalfa	322	53.3	81	200	119	5.5
75% alfalfa	268	49.7	80	167	87	5.7

TABLE 7

Experimental groupings—	Total ration consumed lb.	Digestible energy efficiency %	Liveweight increases lb.	Estimated vitamin A stores weeks
Initial levels of alfalfa:				
10%	251.6	54.6	111	6.7
15%	274.6	56.5	121	7.5
20%	302.8	55.8	126	6.8
25%	289.3	51.9	104	7.2
Weekly rate of increase of parts of alfalfa:				
1.0000	248.1	53.7	109	5.1
1.1747	282.6	55.4	125	7.2
1.3494	276.2	55.1	112	8.9

Summary of Three Experiments

A summarization of these three experiments follows:

The very young dairy calf appeared unable to utilize appreciable quantities of dehydrated alfalfa in its ration; however, initial levels of alfalfa between 15 and 20% and increased gradually to between 50 and 60% at 13 weeks of age gave greater feed utilization and growth response in the Holstein male calf than smaller or larger amounts of alfalfa. It was found feasible to feed mixtures of ⅛" alfalfa pellets and ¼" starter pellets to Holstein calves. The dust hazard created when pelleting mixtures containing appreciable quantities of dehydrated alfalfa meal can thereby be eliminated.

It would therefore appear that dehydrated alfalfa pellets could be used to good advantage in the ration of young calves in those areas where hay is scarce or poor in quality. The pellets produced greater gains and a larger storage of vitamin A than hay produced from the same field but field-cured.

More detailed information concerning these experiments may be had from the following references:

(1) Eaton et al., J. Dairy Science, 34: 124, 1951; (2) Eaton et al., J. Dairy Science, 35: 98, 1952; (3) Dolge et al., J. Dairy Science, 35: 424, 1952; (4) Dolge et al., Storrs (Conn.) Agr. Experiment Sta. Bul., 291, 1952; (5) Dolge et al., J. Animal Science (Abstract) 11: (in press) 1952.

Two Honored in Wisconsin for Work With Alfalfa

MADISON, WIS.—Two agricultural leaders who were instrumental in expanding Wisconsin's alfalfa acreage were honored this month at the University of Wisconsin. They were Larry F. Graber, veteran Wisconsin agronomist and "father" of alfalfa in the state, and John Stauber, Marshfield banker.

Mr. Graber, professor of agronomy at the University of Wisconsin, was given honorary recognition for almost 40 years of service to farm people. His first assignment in 1910 was to step up Wisconsin feed supplies by urging farmers to grow alfalfa. In 1910 only 18,000 acres were grown; in 1952, two million.

Because of his research, two scientific organizations have made him a member: the American Society of Agronomy and the American Association for the Advancement of Science. He was president of the first organization in 1949.

Mr. Stauber has spark-plugged the alfalfa program in central Wisconsin. He started giving 2% interest alfalfa production loans for soil building—something new in farm banking relations. He encouraged other bankers to do the same. As vice president of the Wisconsin Bankers Assn., Mr. Stauber says that his major goal has been to get all banks in the entire state to accept the challenge of soil fertility building.

SEED TREATMENT UPS STANDS, TESTS SHOW

WILMINGTON, DEL.—Treatment of alfalfa seeds with an organic sulfur compound resulted in an average increase in stand of 32% in 60 test fields during the past summer, according to E. I. du Pont de Nemours & Co. The chemical is "Arasan," which the Du Pont firm said acts as a protectant for the seed and seedling against disease.

The firm reported that increases ranged as high as 118%, a figure posted at the C. K. Stewart farm, Malvern, Iowa. The 1952 tests were the third in a series of farm trials. Du Pont reported that 91 tests have been made with alfalfa, resulting in an average increased stand of 32%.

WILLIAMSBURG AVAILABLE

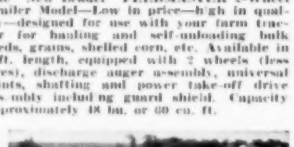
BLACKSBURG, VA. — Seed for Williamsburg alfalfa will be available for planting in Virginia next season. The variety was developed at the Virginia Polytechnic Institute, but the seed has been produced in other states. Dr. T. J. Smith and W. W. Lewis, Virginia Polytechnic Institute, report that Williamsburg normally shows a yield increase over other varieties and appears to be more resistant to some diseases.

WORLD'S FINEST! FOR HAULING BULK FEEDS

The Famous "NEW LEADER" BULKMASTER

FARMERS, FEEDERS and POULTRY RAISERS are now interested in buying their feed in bulk instead of bags to save money, time and labor as well as bag costs. Progressive Feed Mill operators are making bulk feed delivery available to their present customers and also gaining new customers and greater sales volume. The famous line of "New Leader" BULKMASTER Self-Unloading Bulk Feed Bodies is engineered to meet these changing customer demands. Available for mounting on trucks and semi-trailers in lengths ranging from 9 to 35 feet and in capacities of 5½ to 22 tons. Get on the BULKMASTER Band Wagon and increase your profits! Use the handy coupon for full details.

The "New Leader" FEEDMASTER 2-Wheel Trailer Model—Low in price—high in quality—designed for use with your farm tractor for hauling and self-unloading bulk feeds, grains, shelled corn, etc. Available in 8-ft. length, equipped with 2 wheels (less tires), discharge auger assembly, universal joints, shafting and power take-off drive assembly including guard shield. Capacity approximately 18 bu. or 60 cu. ft.



The "New Leader" FEEDMASTER Farm Wagon Model — Greater capacity — low in price for mounting on your 1-wheel farm wagon. Designed for use with your farm tractor for hauling and self-unloading bulk feeds, grains, shelled corn, etc. Available in 10-foot length equipped with discharge auger assembly, universal joints, shafting and power take-off drive assembly including guard shield. Ready to hook to tractor. Capacity approximately 60 bu. or 75 cu. ft.

The Famous "New Leader" BULKMASTER, JR.—pick-up and farm trailer model designed primarily as a bulk feed hauling unit, yet capable of handling most anything the ordinary pick-up truck body can handle. Available in 2 sizes, 7-foot with 104-bu. capacity (or 130 cu. ft.) and 9-foot with 133⅓ bu. capacity (or 167 cu. ft.). Removable endgate and folding steel doors to make floor for hauling packaged goods (exclusive with "New Leader") available as optional equipment.

HIGHWAY EQUIPMENT COMPANY, INC.

632 D AVE. N. W.
CEDAR RAPIDS, IOWA

Manufacturers of the World's Most Complete Line of Spreaders and Bulk Delivery Equipment

Mail to Highway Equipment Co., Inc.
632 D Ave. N.W., Cedar Rapids, Iowa.
For full information without obligation send me information on the following:
Truck Model Semi-trailer Model
Pick-up Model Farm Wagon Model
2 Wheel Trailer Model

Name .....
Street and R.F.D. .....
City and State .....

THERE is nothing we value more than the many friendships we have made throughout the alfalfa industry. We always will strive to live up to our first aim in business—that of performing the best service possible to both buyers and sellers. We look forward to seeing you at the ADA convention in Arizona next January.

BILL NOEL BILL BURGE

G. W. NOEL & CO.

Phone ENdicott 5511 • P. O. BOX 7045 • Kansas City, Mo.

A group of golfers was telling tall stories. At last came a veteran's turn. "Well," he said, "I once drove a ball, accidentally of course, through a window. The ball knocked over an oil lamp and the place caught on fire."

"What did you do?"

"Oh," said the veteran, "I immediately teed another ball, took careful aim, and hit the fire alarm on Main Street. That brought out the fire trucks before any damage was done."

◆ ◆ ◆

Little Susan was just home after her first day at school. "Well, darling," asked her mother, "what did they teach you?"

"Not much," replied the child. "I've got to go again."

◆ ◆ ◆

Man walked into a bar, ordered a drink, explained he was celebrating his divorce. "When were you divorced?" the bartender asked solicitously. "Twenty-five years ago," came the reply.

◆ ◆ ◆

Tony Martin, discounting movie fame, wailed: "One day you're making love to Monroe, another day to Taylor, another day to Leigh, then the next day you're a has-been."

"Yeah," spoke up a friend, "but look where you has been!"

◆ ◆ ◆

A now-famous slip in type was the headline, "Bottle-scarred veteran returns." Next day the red-faced publisher made an attempt to correct the error. This is the way the correction turned out: "Battle-scared veteran returns."

◆ ◆ ◆

"I promise you," said he with mock severity, "the next time you contradict me, I'm going to kiss you."

"Oh, no, you're not!" she cried.

◆ ◆ ◆

The number of times the average man says "no" to temptation is once weakly.

◆ ◆ ◆

"Pardon, miss, but swimming is not allowed in this lake."

"Why didn't you tell me before I undressed?"

"Well, there ain't no law against undressing."

◆ ◆ ◆

A Hollywood producer received a story entitled, "The Optimist." He called his staff together and said: "Gentlemen, this title must be changed to something simpler. We're intelligent and know what an optimist is, but how many of those morons who'll see the picture will know he's an eye doctor?"

◆ ◆ ◆

"Young man, it's past midnight! Do you think you can stay with my daughter all night?"

"I'll have to telephone mother first."

◆ ◆ ◆

A merchant who was going bankrupt for the seventh time was informed by his accountants that he could only pay 3¢ on the dollar.

"No, sir," said the merchant. "I've always paid 10¢ and I'll do it this time. I'll pay the rest out of my own pocket."

◆ ◆ ◆

"Will you really marry me?" the trembling youth exclaimed, as if unable to realize his good fortune. Then —"When we're married, darling, the dark clouds will roll away and the blue sky . . ."

"Just put the ring on my finger," suggested the practical-minded girl, "and you can forget about the weather report!"

◆ ◆ ◆

Bus Driver: "Madam, that child will have to pay full fare. He's over five years of age."

Child's Mother: "Why, I've only been married four years!"

◆ ◆ ◆

It was the teen-aged daughter's first dance and she desperately wanted an off-the-shoulder frock. Her mother felt she wasn't old enough to wear anything so sophisticated. Father finally settled the heated family discussion. "Let her try one on," he suggested. "If it stays up—she's old enough to wear it."

◆ ◆ ◆

Officer: "You interested in a commission?"

Recruit: "No, I'm not too good a shot. I'd rather work on a straight salary."

◆ ◆ ◆

Ardent dog fanciers, a young couple had always had their home overrun with canines. When a baby arrived, everybody wondered how the infant would get along with all the four-footed pets. A friend inquired, "Does the baby talk yet?"

"Not yet," the mother said, "but he's learning to bark."

◆ ◆ ◆

Singer: "Don't you like my voice?"

Accompanist (sadly): "Madam, I have played on the white keys, and I have played on the black keys—but you sing in the cracks!"

◆ ◆ ◆

First Pharmacist: "So Pestle is dead! He was a great druggist."

Second Pharmacist: "He was, indeed, but don't you think he made his chicken salad a little too salty?"

QUICK COLORADO SERVICE

CAROTENE • CHLOROPHYLL • PROTEIN • FIBER • GENERAL ASSAYS

Write for Details on Contract Service

INDUSTRIAL LABORATORIES CO., DENVER, COLO.

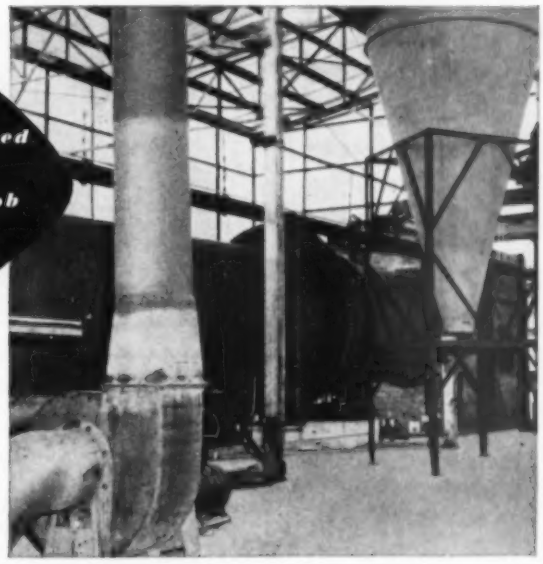
P. O. Box 2209 • 1354 13th St. • Phone AComa 1305

See Louisville for

CREATIVE DRYING ENGINEERING

How a new Louisville Dryer can lift production by 4½ times...profits by $11.54 per ton

Designed to do your job best!



FORMER DRYER	
Installed cost	$9,000.00
Annual production (tons)	450
Drying cost per ton	$18.60
Capacity, lbs. dried product per hour	600

LOUISVILLE DRYER	
Installed cost	$36,000.00
Annual production (tons)	2,625
Drying cost per ton	$7.06
Capacity, lbs. dried product per hour	3,500

EXTRA PROFIT PER TON DRIED WITH LOUISVILLE DRYER $11.54

Don't call in a "boy"—when the job is man-size! Small-production dryers *can* cost you big money—as the performance comparison figures shown here prove clearly. Here's black-and-white proof that it pays to have a Louisville engineer check over your dryer capacity.

A study of your problem may show that a larger-capacity Louisville dryer—especially designed for your purpose—will turn out 4½ times more production—with little if any increase in your labor costs. In fact, labor savings alone may spell the difference between a good profit or a sagging loss.

Find out what a specially designed Louisville dryer—with output pretested in our own unique laboratory and pilot plant—will do for you. Ask for a Louisville survey of your problem. There is no obligation.

Other General American Equipment:

Turbo-Mixers, Evaporators, Dewaterers, Towers, Tanks, Bins, Filters, Pressure Vessels

PROCESS EQUIPMENT DIVISION GENERAL AMERICAN TRADE MARK

Louisville Drying Machinery Unit

Over 50 years of creative drying engineering

GENERAL AMERICAN TRANSPORTATION CORPORATION

Dryer Sales Office: 139 So. Fourth Street
Louisville 2, Kentucky
General Offices: 135 So. La Salle Street, Chicago 90, Illinois
Offices in all principal cities
In Canada: Canadian Locomotive Co., Ltd., Kingston, Ont.

USDA Sees Increase in Cattle Feeding Volume This Season

WASHINGTON — The volume of cattle feeding this season is expected to be somewhat larger than last year, the Bureau of Agricultural Economics points out.

Officials of the U.S. Department of Agriculture agency cited the prospective increase in reporting on the cattle feeding situation as of Nov. 1.

Prospective large increases in cattle feeding are seen for some Corn Belt states, but these will be partially offset by decreases in feeding sections outside the Corn Belt.

The movement of feeder cattle into the Corn Belt continued large during October, reaching a record volume for the month. The July-October inshipments were 20% above last year. Cattle feeding is expected to be as high or higher than last year in all of the Corn Belt states except Kansas.

Feed grain supplies are larger than last season in the western Corn Belt, but below last year for other regions of the country. Hay and roughage supplies are generally adequate in most feeding areas, but demand for hay is strong from drouth stricken areas.

In the West, cattle feeding operations will probably be below last year. In both California and Colorado the number of cattle on feed is expected to be below the record high number fed last year but still at a high level. In other western states the trend is mixed with operations indicated to be higher in some states and lower in others.

Cattle feeding in Texas will be sharply reduced from last year. Wheat pastures failed to develop in the Great Plains due to continued drouth.

In discussing the Corn Belt situation, BAE officials noted that shipments of stocker and feeder cattle into the nine Corn Belt states for which records are available for the months July through October were about 20% larger than last year. All of the Corn Belt states except Nebraska and South Dakota show increases over last year in the July-October inshipments.

Largest increases were in Minnesota, Wisconsin and Ohio, all of which reported increases of over 50%. Other states showing increases were Indiana, Illinois, Michigan and Iowa. Feeder cattle inshipments from public markets were below a year ago for Missouri and Kansas.

Feeding activity in California probably will be somewhat lower than last season, but still at a very

CALL THE POLKA DOT FOLKS
Victor 4385

Eugene L. Selders

Robert N. Kivett

Gerald E. Chase

Elsie Miller

Billie Stair

TRY US On Your Next Purchase of:
PROTEINS
MILLFEED
PROCESS GRAINS
BREWERS' PRODUCTS
DISTILLERS' PRODUCTS
HOMINY
SCREENINGS
MOLASSES
Members of the Grain and Feed Dealers National Association

ALL FEED INGREDIENTS
Eugene L. SELDERS CO.
"The Polka Dot Folks"
BOARD OF TRADE
KANSAS CITY 6, MO.
Victor 4385
Protein Dept., TWX-KC 39
Other Ingredients, TWX-KC 136

Prompt CAROTENE ASSAYS Service
Official AOAC Methods
ALSO FAT, FIBER AND PROTEIN ANALYSIS
Complete Laboratory Service for the Feed Industry
WRITE US FOR CONTRACT RATES
The ST. JOSEPH TESTING LABORATORIES, Inc.
Box 910, ST. JOSEPH, MO. • C. C. WALKER, Director

Progressive Processors of Alfalfa Meal
MORRISON & QUIRK
Home Offices
Hastings, Nebraska · Box 74
Member American Dehydrators Association

A PROUD NAME BEST BY REPUTATION
Modelo BALER AND BINDER TWINE
GUARANTEED QUALITY
NEW LOW PRICES

More Bales Tied Per Dollar
Bull-Dog Tough MODELO
A FEW SELECT TERRITORIES AVAILABLE FOR REPUTABLE, WELL-ESTABLISHED DISTRIBUTORS
J. C. SHUFORD CO.
Merchandise Mart Chicago 54, Ill.
EXPERIENCED IN CORDAGE SINCE 1924

high level. Colorado, the leading feeding state in the mountain area, will feed fewer cattle than the record number fed last season. In Washington, Oregon and Utah more cattle are expected to be placed on feed than last season. In the remaining states the number of cattle to be fed will be about the same or smaller than last year.

The number of cattle fed in the irrigated North Platte Valley of western Nebraska and eastern Wyoming is expected to approach the rather larger number fed last season. Numbers fed in Oklahoma and Texas are expected to be sharply below last year because of short feed supplies. As a result of drouth, little wheat pasture is available for livestock in the southern Great Plains. In this area native pastures and feed of all kinds are very short.

Large Corn Crop Cited

The 1952 corn crop is expected to be the second largest on record. The crop is of excellent quality, and there is no pressure to feed the crop rapidly as was the case last year in areas where considerable quantities of soft corn had to be fed rather quickly to avoid deterioration. Hay production in 1952 is less than the very large crop harvested last year, but is ample in most of the important feeding states. However, demand for hay from areas hit by drouth has pushed up hay prices in the feeding areas of the Plains and Mountain states.

The price of feeder steers at eight feeder markets for the week ending Oct. 30 was $24.20 cwt. or $8.80 lower than for the same week last year. The average price per cwt. during October was about $9.50 below last October, and the July-October average was about $8.50 lower.

Contract feeding is generally on a larger scale than usual. Some ranchers, disappointed in lower prices for feeder cattle this fall, are placing their cattle in commercial and farm feed lots for custom feeding rather than to sell at prevailing prices for feeder cattle.

Many lightweight cattle have been purchased for long term feeding. The record for eight markets shows that during the July-October period the number of feeder calves and steers under 700 lb. shipped to country points was up 11% from last year and made up 57% of the stocker and feeder cattle and calves going to the country. The number of heavy feeder steers weighing over 900 lb. shipped from these eight markets during July-October was down 5% from a year ago.

Special surveys made Oct. 1 in the three leading cattle feeding states in the Corn Belt—Illinois, Iowa and Nebraska—showed 14% more cattle on feed than on Oct. 1, 1951.

4-H Club Congress Set Nov. 30-Dec. 4 at Chicago Hotel

CHICAGO—Climax of a year's 4-H Club work for 1,200 4-H boys and girls will be the 31st National 4-H Club Congress at the Conrad Hilton Hotel in Chicago Nov. 30-Dec. 4.

All 4-H Congress delegates chosen are state and federal winners in various 4-H projects, the best among the nation's 2 million members. National winners named at the Congress will receive 150 scholarships valued at $44,700. Many of the delegates already have won college scholarships, medals, watches, savings bonds and other awards as incentives for their 4-H accomplishments.

Theme of the 1952 Congress is "Serving as Loyal Citizens Through 4-H."

While in Chicago for one week more than 50 organizations will be hosts to educational tours, meals and entertainment. While the youngsters will not lack for entertainment there will be much serious work also—forthright group discussions, addresses by prominent speakers and exchange of ideas with youth from other states and countries.

Delegates will register from 3-5 p.m. Nov. 29 and on Nov. 30 get-acquainted luncheons are scheduled for project winners in achievement, electricity, health, food preparation, home improvement, dress revue, safety, tractor maintenance and entomology. Special award breakfasts and dinners are scheduled for the remainder of the week with various public-spirited manufacturers, foundations and companies being hosts.

The finale will be the annual 4-H banquet in the grand ballroom of the Conrad Hilton Hotel Dec. 4.

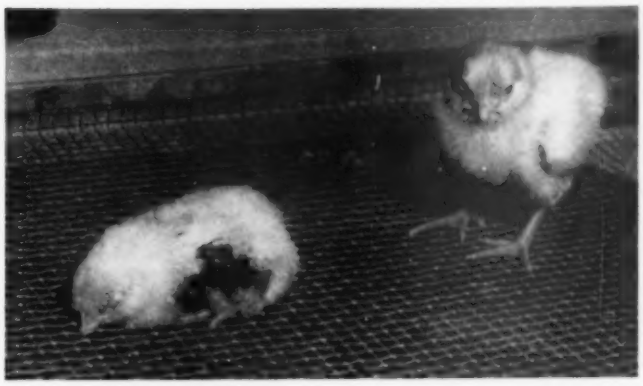
Over-all attendance is expected to be 1,800, including guests and observers from several foreign countries. Major press associations, wire services, radio networks, magazines and newsreels will cover the event.

The Congress is planned and conducted jointly by the Extension Service and the National Committee on Boys and Girls Club Work.

ALFALFA HOPPER BLAMED

BLACKSBURG, VA.—The three-cornered alfalfa hopper, a small, pale green, sucking-type insect, is believed to be largely responsible for the yellowing of alfalfa reported throughout Virginia the past few weeks, according to S. B. Fenne, plant pathologist, and Dr. J. O. Rowell, entomologist at Virginia Polytechnic Institute.

In 1950 and 1951 there was considerable injury from the insect. There also was an outbreak in 1941. The insects girdle the stems in an irregular and continuous line. The plant juices are lost, stems are weakened, circulation is cut off from the upper part of the plant, and many plants become yellow and purple, then break off and die.

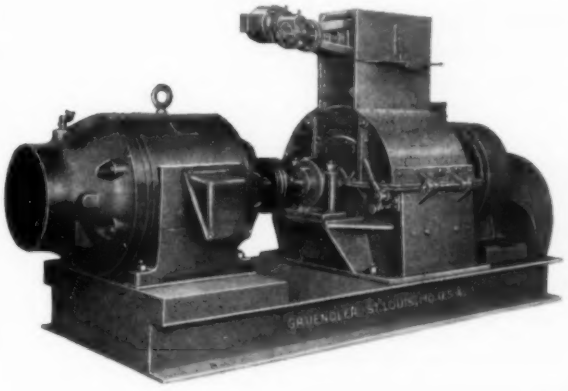


ALFALFA IN DIET OF BREEDER HENS—The chick at the right is from a hen fed dehydrated alfalfa meal in a breeder ration. The chick on the left was from a hen which did not receive the dehydrated alfalfa. The latter chick bled to death when wingbanded, whereas the chick at the right was not affected by that simple process. The deficiency of vitamin K caused the death from profuse bleeding. The experiments were performed at Texas A & M College in the past year. (See report of project on page 31a.)

PIONEERING *and* RESEARCH

PAY OFF FOR ONE INDUSTRY—ALFALFA

The use of alfalfa meal in formula feeds for many years has been found to be an important ingredient. In recent years drying of fresh-cut field hay has increased both protein and "carotene," so valuable and necessary to animals.



GRUENDLER'S PART

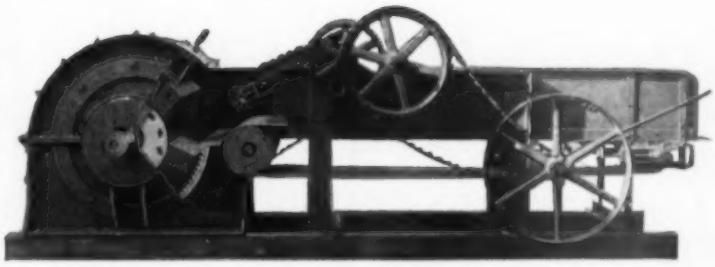
in this important industry is the development of the most suitable grinding equipment, whether dehydrated or sun-cured.

At the Left is shown

—Our centerfeed, manufactured in suitable sizes, both high speed and slow speed for fine grinding and most uniform grind, often mentioned a basis for comparison.

At the Right

—We see a large GRUENDLER Sun-cured Grinder. A very sturdily-built unit for handling baled or loose hay; producing standard alfalfa meal in one operation, or for primary reduction.



It is a pleasure to say that, after some 32 years, many of our machines are still going strong, even in these modern times. No grinder has won greater esteem in any industry than has GRUENDLER in this most important industry—"ALFALFA."

Write for Literature

GRUENDLER CRUSHER & PULVERIZER CO.

2919 NORTH MARKET STREET • ST. LOUIS 6, MISSOURI

Laying Flock Above Average, But Potential Number Lower

WASHINGTON—The nation's laying flock averaged 354,476,000 layers in October, 1% more than in October last year and 2% above average, the U.S. Department of Agriculture reports.

Numbers of layers were up from last year in all parts of the country, except the south Atlantic and west north central regions where they were down 1 and 4%, respectively. (See accompanying table.)

Increases from last year were 5% in the West, 3% in the north Atlantic and south central and 1% in the east north central states. The seasonal increase in layers from Oct. 1 to Nov. 1 was 7.3%, compared with 9.9 last year and the average of 10.1%.

Potential layers (hens and pullets of laying age plus pullets not of laying age) on farms Nov. 1 totaled 447,951,000, the smallest number since 1949—5% less than a year ago and 11% below the average. Holdings were smaller than a year ago in all parts of the country except in the West where they were about the same.

21% Lower

There were 81,004,000 pullets not of laying age on farms Nov. 1—21% less than a year ago and 41% below the average. All parts of the country had smaller holdings than a year ago, the decreases ranging from 15% in the South Atlantic to 32% in the North Atlantic states. On Nov. 1 about 82% of the potential layers were in the laying flock, compared with 78% a year ago and the average of 73%.

Farm flocks laid 4,402 million eggs in October, a record high number for the month. This was 4% more than in October last year and 34% above the 1941-50 average for the month. An early movement of pullets into laying flocks this fall and favorable weather were conducive to record high October egg production in all parts of the country except the west north central states.

The rate of egg production in October was 12.4 eggs per layer on hand, a new high rate for the month, compared with 12 last year and the average of 9.5 eggs. The rate reached new high levels in all parts of the country and exceeded the rates of last year from 1 to 4%. The U.S. rate per layer on hand during the first 10 months of this year was 154 eggs, compared with 152 last year and the average of 138 eggs.

Egg Prices Advance

Prices received by farmers for eggs in mid-October averaged 50.4¢ doz., compared with 55.6¢ a year earlier. Egg prices increased 1.7¢ doz. during the month ending Oct. 15. Egg markets during October were steady to firm on mediums and smalls and irregular on large. Seasonally light offerings of fresh large eggs were at times short of trade needs.

Chicken prices (farm chickens and commercial broilers) on Oct. 15 averaged 24.2¢ lb. live weight, compared with 24.5¢ a year ago. Farm chickens averaged 20.4¢ and commercial broilers 29.1¢, compared with 23 and 26.4¢ in mid-October last year. Live poultry markets were somewhat unsettled during October, but closed steady to firm.

Turkey prices in mid-October averaged 32.9¢ lb. live weight, compared with last year's price of 35.8¢. October turkey markets were steady to firm. Most processing plants in the producing areas were operating at full capacity. Farm offerings were heavy on young toms and moderate on hens.

ALFALFA PRODUCERS URGED TO TEST SOIL

BLACKSBURG, VA.—The Virginia Polytechnic Institute advises alfalfa producers in Virginia that soil tests are particularly important because alfalfa has higher lime and fertilizing requirements than do most crops. The institute explains that a soil test now will make it possible to apply the correct amount of lime, if needed, on the land this fall. The soil reaction will be right when alfalfa is seeded in 1953.

Alfalfa is a heavy user of potash, and soil tests will show whether the fertility levels of this material, along with phosphorus and calcium, are high enough.

NEW CHLOROPHYLL PLANT

LAMAR, COLO. — J. C. Hearne, president of the newly formed National Chlorophyll and Chemical Co., Lamar, recently announced initiation of construction of a plant with an annual capacity in excess of 100,000 lb. The nation's chlorophyll capacity by 1954 is expected to be several fold that of 1952, estimated by Mr. Hearne at about 95,000 lb.

HENS AND PULLETS OF LAYING AGE, PULLETS NOT OF LAYING AGE, POTENTIAL LAYERS AND EGGS LAID PER 100 LAYERS ON FARMS, NOV. 1

Year	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	United States
Hens and Pullets of Laying Age on Farms, Nov. 1							
			Thousands				
1941-50 (av.)	52,155	71,966	100,776	33,968	70,511	33,686	363,062
1951	65,227	73,102	101,063	35,085	59,325	35,455	369,257
1952	66,272	73,618	95,628	34,418	60,063	36,948	366,947
Pullets Not of Laying Age on Farms, Nov. 1							
			Thousands				
1941-50 (av.)	17,474	26,353	45,745	12,663	25,025	10,396	137,656
1951	18,857	17,873	31,036	9,978	17,044	7,423	102,209
1952	12,810	14,363	26,173	8,484	13,436	5,738	81,004
Potential Layers on Farms, Nov. 1*							
			Thousands				
1941-50 (av.)	69,629	98,319	146,521	46,631	95,536	44,082	500,718
1951	84,084	90,975	132,099	45,063	76,369	42,876	471,466
1952	79,082	87,981	121,801	42,902	73,499	42,686	447,951
Eggs Laid Per 100 Layers on Farms, Nov. 1							
			Number				
1941-50 (av.)	37.8	29.9	26.5	24.2	21.9	33.6	28.4
1951	45.5	40.3	35.6	33.2	31.1	43.9	38.1
1952	47.2	41.0	37.1	32.9	30.9	44.7	39.0

*Hens and pullets of laying age plus pullets not of laying age.

"This brings us to 1940, when the industry started its greatest development."

ACME TRAFFIC SERVICE
We are rate specialists for the alfalfa industry, publishers of the up-to-the-minute *Alfalfa Meal Rate Book* and traffic managers to the American Dehydrators Assn.
RAY COX JOHN CHIABOTTA
316 Board of Trade • Kansas City, Mo.

GRESHIK'S DEHYDRATED ALFALFA MEAL
Buy your meal from fertilized soil. All alfalfa grown on my land which is fertilized every year.
Dehydrated or Suncured Meal
Telephone 121
JOS. GRESHIK, Fountain City, Wisc.

Kaw DEHYDRATING COMPANY
Quality Alfalfa Meals
General Offices—Topeka, Kansas
PLANTS — Rossville, Kansas • Topeka, Kansas • Brady, Nebraska

SNYDER EQUIPMENT COMPANY
612 BOARD OF TRADE
INDIANAPOLIS 4, IND.
SCREENS
KNIVES
HAMMERS

CALIFORNIA SPEAKER—Prof. C. E. Howell of the animal husbandry department, University of California, Davis, spoke on nutrition of horses at the recent Animal Industry Conference at Sacramento, Cal. Prof. George F. Stewart, program committee member, is in the background. A report of the conference was printed on page 8 of the Nov. 8 issue of Feedstuffs.

PRODUCTION OF MILK SHOWS SMALL INCREASE

WASHINGTON—The U.S. Department of Agriculture reports that milk production on U.S. farms during October totaled 8,578 million pounds, about the same as the 1941-50 average for the month, and slightly above production in October, 1951. The increase over the corresponding month a year ago was the first recorded in eight months.

The dry weather during October, while cutting short growth of fall pastures, was generally favorable for the grazing of crop residues. The open weather was likewise beneficial to milk cows that already had been shifted to winter rations.

Milk production per capita during October averaged 1.76 lb. a day, the lowest for the month in 23 years of record. However, the annual rate of farm milk production indicated by October output was the highest in 19 months. Milk production in the first 10 months of 1952 totaled 98.9 billion pounds, some 1.3 billion below that for the same period a year ago.

On Nov. 1, milk production per cow in herds kept by crop reporters averaged 14.70 lb., about the same as a year earlier and 11% above average. Regionally, production per cow was sharply below a year ago in the south central and western regions, slightly below in the Atlantic Coast regions, but substantially above in the north central regions. In all regions, production per cow was above average—3% above in the south central region and some 10 to 12% above in other areas.

ALFALFA ACREAGE SHOWS STEADY GAIN

Acreage and production of alfalfa has shown a fairly steady rise. Back in 1931, 11,740,000 harvested acres yielded 21,396,000 tons. This was 1.82 tons an acre. By 1950, the acreage had increased to 18,308 000, with a total production of 42,937,000 tons, or 2 2 tons an acre.

Alfalfa production, like that of many of the other crops, has benefited from new breeding developments leading to greater disease resistance and increased tonnage. This accounts in considerable measure for the rise in yield.

Much of the production increase has taken place in the Middlewest where large quantities are fed. California also has stepped up production in a rather dramatic fashion. This deep-rooted, drouth-resistant legume has made a noteworthy contribution to soil conservation and the expansion of livestock production at low cost.

—Armour's Analysis.

THE
NEUMOND
COMPANY

300 Merchants Exchange Bldg.
St. Louis 2, Mo.

Specialists in dehydrated and suncured alfalfa meal from South Dakota, Nebraska, Colorado, Ohio and the Mississippi Valley

Memo to Alfalfa Dehydrators in the Midwest:

Memo

NEW MULTIWALL PAPERS
MANUFACTURED IN KANSAS CITY

NEW COTTONS and BURLAPS
MANUFACTURED IN KANSAS CITY AND DES MOINES

USED COTTONS and BURLAPS
PROCESSED IN KANSAS CITY

MARVIN COVEY
JOHN KELLER
BILL GORE
IRVIN LINSCOMB
GILBERT JACKSON

PIONEER BAG CO.
NORTH KANSAS CITY, MO.
NORCLAY 4635
DES MOINES, IOWA
PHONE 8-1159

Composition of Dehydrated Alfalfa Meal

THE following paragraphs summarize the best present knowledge on the chemical composition, vitamin content and physical properties of dehydrated alfalfa meal, as described in publications of the American Dehydrators Assn. with the collaboration of the Alfalfa Research Council.

Protein

The accepted standard for the protein content of dehydrated alfalfa is 17% and most feed manufacturers have standardized on a 17% guaranteed protein product. Some 20% protein dehydrated alfalfa meal is also produced and used in poultry feeds. It is possible to produce dehydrated alfalfa meals ranging from 14% to 26% protein depending on time of cutting and local soil conditions.

The amino acid distribution in alfalfa protein is fairly constant and supplies certain essential amino acids in greater amount than is found in the commonly used grains. This is especially true as regards lysine, methionine, tryptophane, threonine, and phenylalanine.

Average amino acid content of a 17% protein dehydrated alfalfa meal would be as follows: Arginine 0.85%; Histidine 0.30%; Isoleucine 0.85%; Leucine 1.10%; Lysine 0.85%; Methionine 0.31%; Cystine 0.31%; Phenylalanine 0.76%; Tyrosine 0.93%; Threonine 0.6%; Tryptophane 0.33%. Among other amino acids for which there are known requirements for chick growth, there is no appreciable amino acid content of glutamic acid, glycine and valine in dehydrated alfalfa meal at the 17% protein level.

Alfalfa protein is digestible to the extent of 72% to 78%.

Fat

Dehydrated alfalfa meal has a relatively low fat content. The ether extract from alfalfa is not all fat since some coloring matter is also extracted. The total is over 2% and usually a little under 3%. Dehydrated alfalfa is not noted for an appreciable fat content, even though it is known to be an excellent source of fat soluble vitamins. The relatively low fat content also keeps alfalfa from becoming rancid. The fat it contains is of good quality.

Carbohydrates

Dehydrated alfalfa contains from 38% to 40% nitrogen-free extract and from 17% to 26% crude fiber. Meal containing more of the leafy portion of the plant will contain less fiber, more protein, and a nitrogen-free extract content near 40%. Good dehydrated alfalfa leaf meal will average 20% protein, 18% fiber and 39% NFE. Dehydrated alfalfa meal —17% protein—the most popular dehydrated alfalfa meal, will average 17.8% protein, 24.2% fiber and 39.7% NFE. (National Research Council, Committee on Feed Composition, 1950). The fiber in dehydrated alfalfa meal is not without some benefit. Heuser states that "any feeds that stay longer in the digestive tract probably have a larger proportion digested". (Feeding Poultry, by G. F. Heuser, John Wiley & Sons 1946).

Moisture

Dehydrated alfalfa has a moisture content of only 7% to 12%. It contains 88% to 93% dry matter compared with fresh alfalfa which contains only 15% to 20% dry matter. Dehydrated alfalfa is many times as concentrated as fresh alfalfa.

Minerals

Dehydrated alfalfa meal is quite rich in minerals and in that respect is a good supplement to grain and grain products.

Dehydrated alfalfa meal is a good natural source of calcium, containing from 1.6% to 1.9% of that element. The phosphorus content will be in the range of .22% to .31%, the higher levels being in meals with a larger proportion of leaves.

The potassium content is in the range of 1.9% to 2.1%; sodium, .14% to .20%; magnesium, .23% to .40%, averaging near .30%. The chlorine content is in the range of .31% to .37%; and sulphur is present in amounts from .3% to .5%, with an average in the vicinity of .32%.

The trace elements are also present. Iron is reported at .032% to .038%. Manganese is a bit more variable, being reported at 15 mg. to 32 mg. per pound. Copper is present to the extent of 3 to 7 mg. per pound, and cobalt to the extent of .05 to .17 mg. per pound. It is suspected that the manganese, copper, and cobalt levels are in part determined by the amounts of those elements present in the soil on which the alfalfa is grown.

Vitamins

Vitamin A — Dehydrated alfalfa meal is the most used source of carotene to supply vitamin A activity. The carotene content is variable, yet quite high. Some values are expressed as I.U. of vitamin A activity per pound; some as parts per million (p.p.m.) and some as milligrams of carotene per pound. The "milligrams per pound" is growing in popularity, although many still like to see vitamin A activity expressed as I.U. (International Units) per pound.

Vitamin A values for dehydrated alfalfa are much higher than for sun-cured alfalfa meals. The National Research Council (Committee on Feed Composition) has released figures from 36 to 60 mg. of carotene per pound of dehydrated alfalfa meal. These amounts are equivalent to 60,000 and 100,000 I.U. vitamin A activity per pound. Morrison (Feeds and Feeding 1948) reports dehydrated alfalfa meals contain from 72,333 up to 135,833 I.U. per pound, equivalent to 44 to 81 mg. of carotene per pound.

Many manufacturers of dehydrated alfalfa meal now sell their product on the basis of carotene content (or vitamin A activity) guaranteed to be present at the time of delivery. Guarantees of 100,000 I.U. per pound are very common, and it is possible to get meals containing twice that amount. Values from 60,000 to 100,000 I.U. (36

DIXON
DEHYDRATED ALFALFA MEAL
LABORATORY CONTROLLED PRODUCTION
DIXON DRYER COMPANY
P. O. Box 296 DIXON, CALIFORNIA Phone 8-2301
In the Heart of the Sacramento Valley

Everybody Loves That Bag Of Mine...
IT'S A
MENTE SEALPAK
LAMINATED BAG

Santa Claus would welcome a Mente SEALPAK Laminated Bag. He'd know that he was carrying his toys in a bag that was water-resistant, odor-proof, contamination-proof, puncture-resistant, weather-safe, acid-resistant, and has other desirable qualities.

A Mente SEALPAK Laminated Bag
Seals Original Moisture IN
Seals Unwanted Moisture OUT

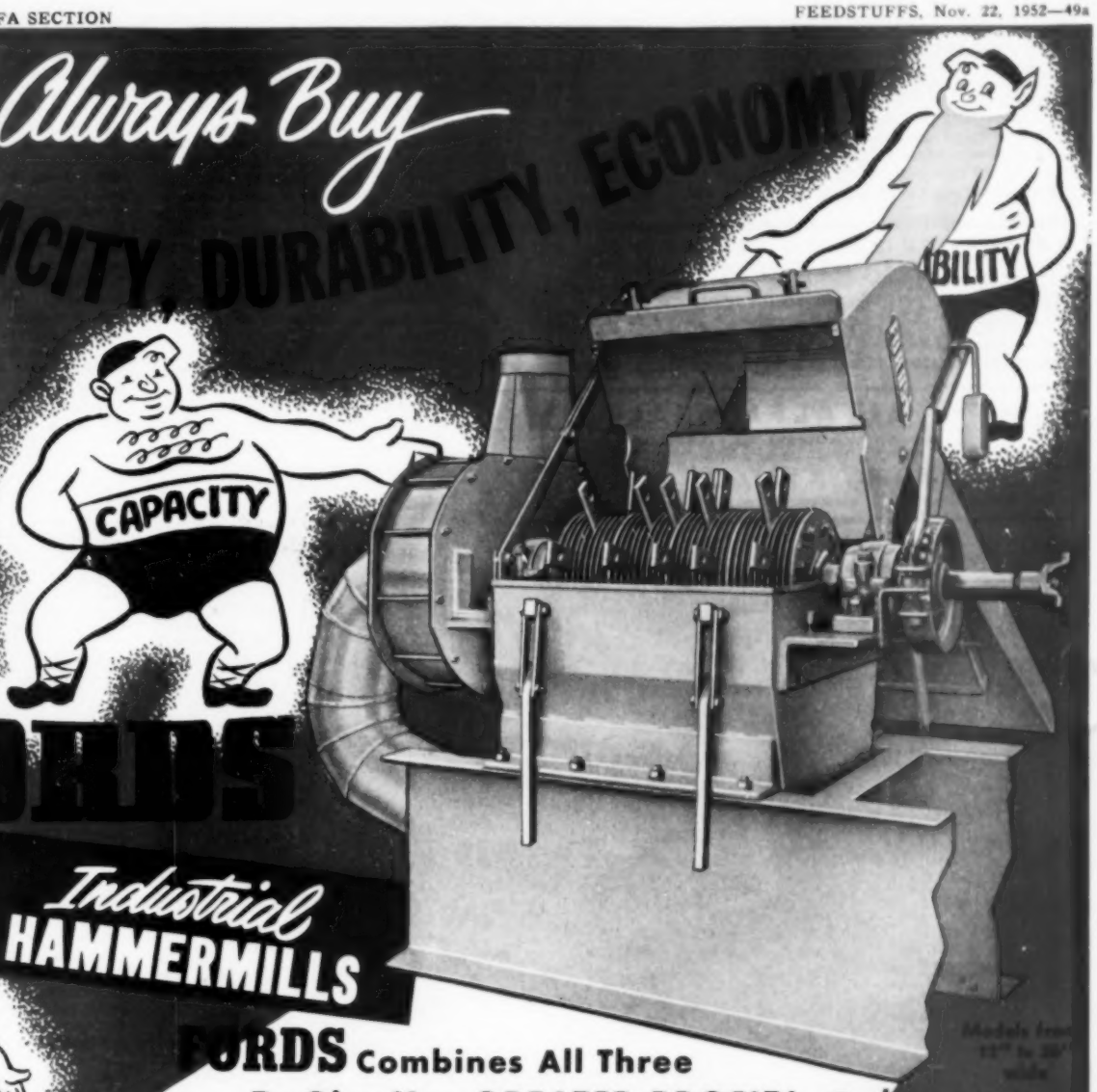
Write, wire or phone for latest quotations
Dept. J

MENTE & CO., INC.

Box 1098 SAVANNAH
Box 690 NEW ORLEANS
Box 204 HOUSTON
Chicago Office: 6349 N. Clark St.

GRAINS • FEED INGREDIENTS
H. V. NOOTBAAR & CO.
890 S. ARROYO PARKWAY
PASADENA 2, CALIF.

Always Buy CAPACITY, DURABILITY, ECONOMY



FORDS Industrial HAMMERMILLS

FORDS Combines All Three To Give You GREATER PROFIT!

FORDS No. 24 Industrial Hammermill (as illustrated) is only one of a complete line of big capacity industrial hammermills. Mill illustration also shows FORDS time-saving mill brake. FORDS mills are the only mills that have mill brakes for emergency stopping and quick screen change.

More grinding per horse power of anything grindable!

Electrically welded steel boiler plate construction; six times stronger than same weight of cast iron!

Lower first cost!
Lower operating cost!

CHOOSE YOUR EQUIPMENT FROM THE COMPLETE FORDS Industrial Line

FORDS "There-Mix" Molasses Blender—Can be fed from any angle and from hopper or batch mixer; capacity from two to six tons per hour.

FORDS Industrial Hammermills — Six models, full range of capacities. Adaptable to any type of power, 20 to 200 H. P. Mills Up to 26" Wide.

FORDS Pneumatic Grainvayor — Standard portable and stationary models available. Special equipment to fit your requirements.

FORDS Vertical Feed Mixer—Above and below floor models; five capacity sizes.

Free

FORDS Complete Line Industrial Mill Catalog!

Big, fully illustrated, shows in detail how you can put The Big Three (Capacity, Durability, Economy) to work for you!

FORDS "..." —for ... shelling ... out ...

MS MYERS-SHERMAN CO.
STREATOR, ILLINOIS

Gentlemen: I'm interested in the hammermill that gives Capacity, Durability and Economy. Without obligation, send me your mill catalog.

Name_____

Address_____

City_____ State_____

MYERS-SHERMAN CO.
31 S. Illinois St., STREATOR, ILLINOIS

to 60 mg. per lb.) are very good for use in making feed.

Vitamin D — Dehydrated alfalfa contains no vitamin D_3 which is the type of vitamin D usable by chickens. Dehydrated alfalfa may contain varying, though small amounts of vitamin D_2, but that vitamin is not of consequence in growing poultry.

Vitamin E—Dehydrated alfalfa is an excellent source of vitamin E. Morrison reports dehydrated alfalfa leaf meal to contain 173 mg. of alpha-tocopheral per pound. That amount is ten times that of good grain, and is exceeded only by wheat germ oil. As a vitamin E source, dehydrated alfalfa meal is excellent. Vitamin E makes for good, sound growth of chicks and poults and has anti-oxidant value which helps protect other nutrients.

Vitamin K—Alfalfa was one of the first sources from which vitamin K was derived. Dr. Heuser says: "Vitamin K is a stable, fat-soluble vitamin. It is found chiefly in alfalfa meal, green pastures, . . ." Exact figures regarding the vitamin K content of dehydrated alfalfa meal are not at hand, but no poultry feed will be deficient in this vitamin if dehydrated alfalfa is used in recommended amounts.

Thiamine (Vitamin B_1)—Dehydrated alfalfa meal is a good source of this vitamin containing from 1.5 to 3.6 mg. per pound (Morrison). These amounts are greater than in most feed grains. In poultry feeds, thiamine content is never a problem because most of the other ingredients used contain enough and to spare.

Riboflavin — Dehydrated alfalfa meal is an excellent natural riboflavin source containing from 7.3 to 7.4 mg. per pound according to the National Research Council. Morrison reports 6.7 to 9.1 mg. per pound. Other tabulators of feed analyses show 6.0 to 7.5 mg. per pound.

These quantities of riboflavin make dehydrated alfalfa meal a valuable and one of the best natural sources of this vitamin and the amounts used in poultry feeds contribute appreciable levels of this vitamin to the ration.

Niacin—The National Research Council Committee on Feed Composition reports from 8.7 to 17.3 mg. of niacin per pound of dehydrated alfalfa meal. Morrison shows 18.0 mg. per pound. Others report 12 to 17 mg. per pound. Dehydrated alfalfa meal is, therefore, a better source of this vitamin than are the grains.

Pantothenic acid — The National Research Council reports from 12.3 to 18.5 mg. of pantothenic acid per pound of dehydrated alfalfa. Morrison shows from 13.3 to 18.2 mg. per pound. Dehydrated alfalfa meal is one of the very best sources of this essential vitamin.

Choline and Betaine — Morrison shows 462 mg. of choline per pound of dehydrated alfalfa meal. Sievert and Fairbanks consider 400 mg. per pound to be a good, conservative figure. Dehydrated alfalfa is also one of the best sources of betaine. Recent assays of 17% dehydrated alfalfa meal have shown betaine content of 1900 to 2300 mg. per pound.

Pyridoxine—This is known to be present, but no representative figures are available at present.

Biotin—Morrison reports .15 mg. of biotin per pound of leaf meal. This is three to five times the amount in most grains.

Folic acid is a constituent, being reported at a level of 4.5 mg. per pound (Smith, Feedstuffs p. 52, March 1, 1947). Morrison gives the figure 3.93 mg. per pound. This amount of folic acid shows dehydrated alfalfa to be foremost in containing this vitamin which is considered so important for growth, feather production and anemia prevention.

Inositol content of alfalfa leaf meal is reported at 2100 micrograms per gram by Woolley in the Journal of Biological Chemistry 140,453 (1941).

Vitamin B_{12} data is somewhat limited. Kohler (Cerophyl Laboratories) reports results on B_{12} similar to those of Peeler et al, Journal of Nutrition, 43, 49 (1951) which was reported as 3 millimicrograms per gram. This is not a nutritionally significant amount as far as chick rations are concerned.

Vitamin B_6—Results have been obtained by Kohler indicating that the total B_6 complex content of dehydrated alfalfa meal is in the range of 5 to 10 micrograms per gram.

Physical Properties

Color—One of the outstanding properties of dehydrated alfalfa meal is its distinctive green color which is made up of several pigments.

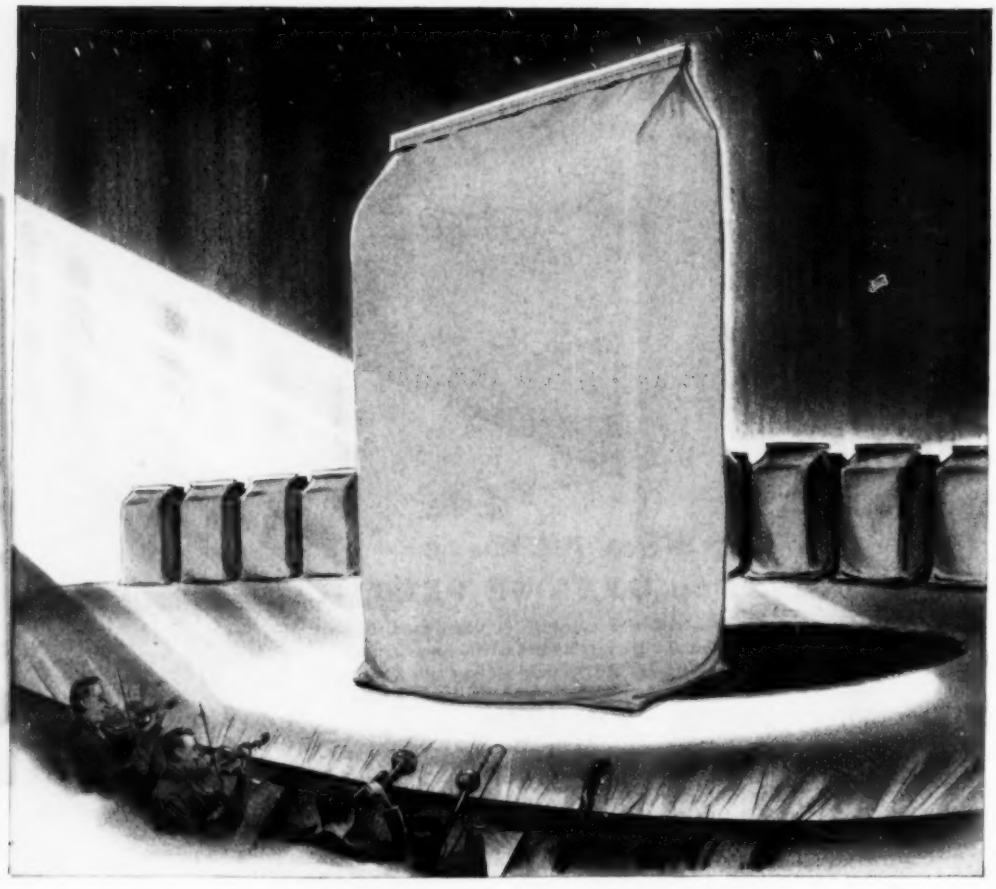
The bright green pigment present in largest amount is probably chlorophyll.

Xanthophylls, the yellow colored pigments are plentiful in dehydrated alfalfa meal. The xanthophylls, the same as found in green grass, are responsible for the coloring of the egg yolks, legs, skin and body fat of birds. The depth of color in these parts can be regulated to some extent by the amount of alfalfa in the ration.

Carotene, a deep orange pigment, is very plentiful in dehydrated alfalfa. Riboflavin is also an orange-colored pigment in dehydrated alfalfa. Folic acid is yellowish in color. These yellow pigments are covered or masked by the green ones to produce the good green color so highly prized by

CHECK OUR PRICES BEFORE YOU BUY!
IMPORTED and DOMESTIC FISH MEAL
DICALCIUM PHOSPHATE — ALFALFA MEALS
AND OTHER FEED INGREDIENTS
BOB WHITE & COMPANY
2001 Board of Trade, CHICAGO 4, Ill. • Phone: Webster 9-3155 TWX CG 1151

Dehydrated ALFALFA MEAL High Carotene
From the Fertile Red River Valley of Minnesota
Write - Phone - Wire
RED RIVER ALFALFA CO.
Earl Saul Phone 61 Crookston, Minn.



PUT *Your* PRODUCT OUT FRONT

V-C Multiwall Bags not only stand up under rough, tough treatment, they also help you sell. Well-designed, expertly printed bags create the kind of impression that builds customer confidence and good-will for your products and company. They help put your product out front.

Ask V-C, manufacturer of quality bags since 1898, to help you improve and modernize your trade design on your multiwalls. Find out about V-C's expert printing. Learn how V-C's top-quality materials and careful construction mean multiwall bags of greater strength and durability at surprising economy.

V-C Multiwall Bags are available in the following styles: sewn open mouth, sewn valve, sewn valve with sleeve or with tuck-in sleeve.

Discuss your bag requirements with a V-C representative.

VC BAGS
Virginia-Carolina Chemical Corporation
BAG DIVISION: 9th and Perry Streets, Richmond, Va.
DISTRICT SALES OFFICES:
Atlanta, Ga. • Wilmington, N. C. • E. St. Louis, Ill. • Cincinnati, Ohio
Other V-C Products: Phosphate Rock Products • Complete Fertilizers • Chemicals • Cleansers • Textile Fibers • Pest Control Products

BAGS
BURLAP COTTON
PAPER PLAIN OR PRINTED
TRUCK COVERS
TWINES
MAX KATZ BAG CO.
INDIANAPOLIS, IND.

feed makers. It should be noted that an appreciable part of the color of good dehydrated alfalfa is due to its vitamin content.

Odor—Dehydrated alfalfa meal has a characteristic odor—an aroma like that of fresh alfalfa, but much more concentrated. As with other feeds having a characteristic odor, that odor is much more noticeable when the alfalfa is slightly warmed. Notice how the odor is much more pronounced when a sample has been warmed in the hand than when freshly taken from a cold bag.

Specific Gravity—This is a term which means "relative bulk" to the feed man. Dehydrated alfalfa meal is quite bulky as compared with most other products used in making feeds.

The ground grains weigh from 1.1 lb. up to 1.5 lb. per qt. except ground oats which weigh 0.7 to 0.8 lb. per qt. In comparison, dehydrated alfalfa meal weighs about 0.6 lb. per qt. Bran weighs 0.5 lb. per qt., being a little bulkier than alfalfa meal.

The bulkiness of dehydrated alfalfa meal is a benefit to many feeds because it provides a texture and permeability that would not otherwise be had.

Particle Size — Alfalfa is first chopped up into proper sized pieces for passage through the dryer and later, when dried, it is further ground to the size wanted by the user.

Some users want a very fine product because it gives the feed into which it is mixed a greener color than results from a coarser grind. Others, however, want a product that is not so fine.

Particle size is very largely a matter that is up to the buyer.

WATCH FEEDER LAMBS

EAST LANSING—Start lambs on feed slowly to avoid digestive upsets and losses, advises L. H. Blakeslee, Michigan State College sheep researcher. Use good legume hay or one tenth pound daily of soybean oil meal with farm grains. Add proteins and calcium if feeding silage and be careful of self-feeding, especially in the cornfield.

POULTRY CONFERENCE SLATED FOR EMPORIA

EMPORIA, KANSAS—A statewide poultry event, the Kansas poultry conference, will be held Dec. 3-5 at the Emporia civic auditorium. Sponsors of the event are the Kansas Poultry Improvement Assn., the Kansas Turkey Federation and Kansas State College.

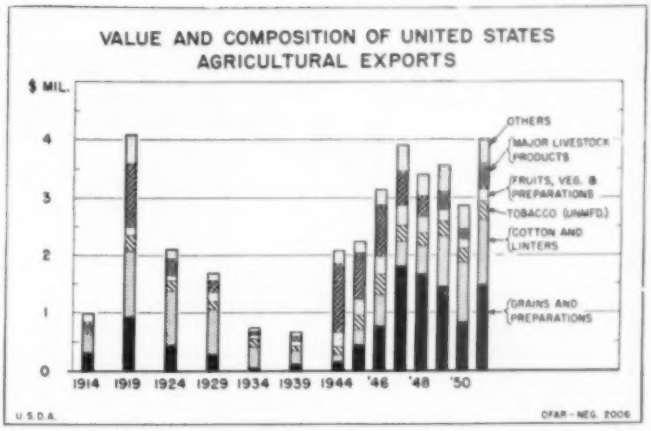
New developments in all phases of the poultry industry will be presented through commercial and educational exhibits, an educational program and various other features.

Elmer Winner, poultry extension specialist, Missouri University, and Don W. Lyon, general manager of the National Poultry & Egg Board, will appear on the educational program.

Other features will cover broilers, turkeys and hatchery and flock management. Educational exhibits will emphasize experimental and consumers' educational work. There will be hatchery flock, egg and dressed turkey shows. A poultry barbecue and a free floor show will feature the Dec. 4 program.

SANITATION NEEDS "PLUG"

EAST LANSING — Sanitation in raising hogs, or any livestock, needs stressing, urges Dr. Glen W. Reed, Michigan State College extension veterinarian. Outbreaks of vesicular exanthema, VE disease, in southern Michigan bring headlines, but insanitary practices cause more livestock losses annually than these spectacular diseases, he says.



EXPORT RECORD—Grain and grain products continue to make up a major share of U.S. exports, although not as large on a value basis as in 1947 and 1948. U.S. agricultural exports rose rapidly until 1947 following adoption of the lend-lease program in 1941, with the grain share mounting accordingly. Grains have become relatively more important than cotton since the war.

ATTENTION

ALFALFA MEAL PROCESSORS!

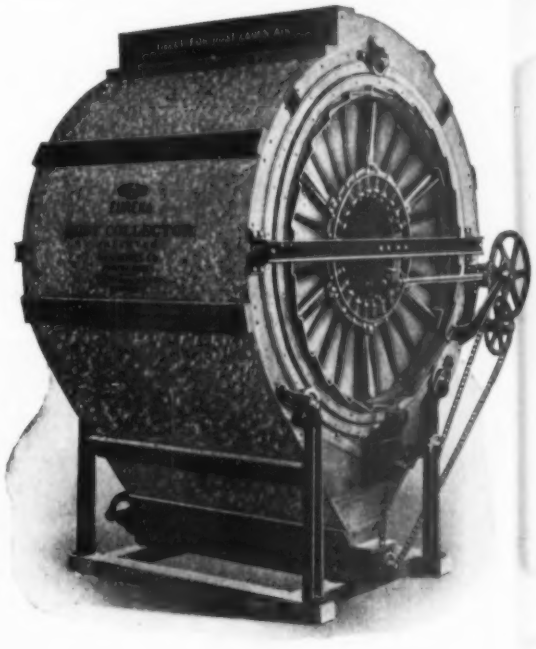
Are You Throwing Away Valuable Fine Leaf Alfalfa Meal to the Four Winds?

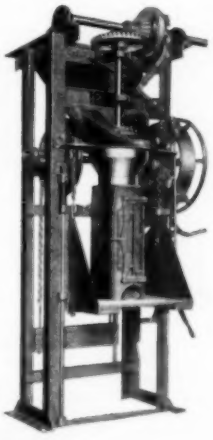
Cap Your Cyclone Dust Collector Outlets and Pipe to

EUREKA TUBULAR FILTER CLOTH DUST COLLECTORS

Reclaim 100% of this Meal. You will realize dividends that can soon pay for this equipment.

Write us for complete information and specifications.





EUREKA ALFALFA MEAL PACKERS

EFFICIENTLY AND ECONOMICALLY PACK AND COMPRESS LIGHT AND BULKY MEAL. THESE AUGER PACKERS ARE ESPECIALLY BUILT FOR THIS SPECIFIC APPLICATION. HUNDREDS ACCLAIM EUREKA PACKERS AS THE MOST OUTSTANDING, LEAST COSTLY, SIMPLEST OPERATING EQUIPMENT NOW AVAILABLE TO ALFALFA PROCESSORS.

Request Bulletin No. 178-A

EUREKA

Remember . . . You Can DEPEND on EUREKA

Since 1856

S. HOWES COMPANY, INC.

SILVER CREEK, NEW YORK

The World's Largest Line of Grain and Seed Cleaning Machinery

NEW BAGS USED

COTTON - BURLAP - PAPER

BEEDLE-WHITON CO.

470 Cleveland Ave. No.

ST. PAUL 4, MINN. - NEstor 6348

READER INTEREST IS WHAT PAYS DIVIDENDS

FEEDSTUFFS

There's no MAGIC

in

SIOUX ALFALFA MEAL

It isn't done with mirrors. The superior performance of Sioux Alfalfa Meal is simply a blend of experience, skill and care—in growing and selecting the finest alfalfa, in proven processing techniques, and in proper packaging and handling procedures. A reputation for quality and service cannot be pulled out of a hat—it must be earned.

SIOUX ALFALFA MEAL CO.
VERMILLION, SOUTH DAKOTA

Dehydrated Alfalfa Meal SIOUX ALFALFA MEAL *Suncured Alfalfa Meal*

PREMIUM IN *quality* BUT NOT IN PRICE

HECO ALFALFA MEAL
DEHYDRATED & SUN-CURED

A CREAM OF THE CROP PRODUCT FROM OUR PLANTS IN NEBRASKA AND KANSAS BEST AREAS

H. E. CLARK Company
WINFIELD, KANSAS

How to Use Dehydrated Alfalfa Meal in Modern Formulas

By C. W. Sievert and Dr. B. W. Fairbanks of C. W. Sievert & Associates, Chicago

For Poultry Feeds

Broiler Feeds and Chick Starters:

Use a minimum of 2½% dehydrated alfalfa in broiler feeds and a maximum of 5% in chick starters. The nutrients contributed are taken into consideration in calculating protein, calcium, vitamin A and riboflavin content—dehydrated alfalfa is a good source of these—as well as the smaller amounts of the other nutrients it contains. Its color helps give the feed color and character, and its xanthophyl content helps pigmentation of shanks and skin.

Growing Feeds:

Use approximately 5% dehydrated alfalfa in growing mashes that are fed with added grain. If the birds are grown on good range this amount of alfalfa is still not excessive. If the range is poor then the alfalfa is of much benefit to the birds.

Laying Feeds:

Use 2½% dehydrated alfalfa on an all-mash basis. This means 5% in the ordinary 18% or 20% egg mash, 7½% in a 26% supplement and 10% in a 32% or 34% laying concentrate. Use it for its nutritional value, and enjoy the color and texture it helps give to the mash.

Breeding Feeds:

Use a minimum of 5% and a maximum of 10% in a 20% breeding mash. Many feeders like 7½%, which is an excellent amount. Dehydrated alfalfa furnishes several nutrients known to be needed for good hatchability. Using more of it in breeding mash than in ordinary laying mash also gives you a color differential that most feeders appreciate. These larger amounts of alfalfa need not lower palatability of the mash when consideration is given to other ingredients also in the formula.

Turkey Feeds:

In turkey starters use 5% dehydrated alfalfa meal. In growing mashes the same level works out well. If birds are grown in confinement it is well to increase the dehydrated alfalfa to 7½%. As the birds grow they will begin to eat additional grain. If they are to be grown on range then 5% alfalfa is enough but we recommend not less than that in order to take care of those instances—which are not infrequent—when range is short, or the flock is moved infrequently. More concentrated range feeds—26% and up to 32% protein—use more alfalfa. Ten to 15% dehydrated alfalfa is normal in those feeds. They are usually fed pelleted and these amounts of alfalfa will not interfere with palatability. Range pellets (26% to 28%) for use on poor range should contain from 15% to 20% dehydrated alfalfa. For turkey breeding rations use at least as much as for chickens, and increase the amount of dehydrated alfalfa a bit for better results.

Game Birds:

Use somewhat more alfalfa than for chickens, or at least as much as for turkeys.

Ducks:

Dehydrated alfalfa in feeds for ducks helps meet the nutritive needs and also helps pigmentation. A pasty white skin looks unappetizing, so use dehydrated alfalfa to help overcome it, and get the nutritive benefits it affords at the same time. From 5% to 7½% dehydrated alfalfa are good amounts to use after the first week or 10 days. We suggest not over 5% in the starter.

Pet Bird Feeds:

Feeds for canaries, parakeets and other pet birds are made up largely of seeds, but some prepared mash type feeds are known to be of value in growing these birds. Use dehydrated alfalfa in levels similar to chick feeds.

For Swine Feeds

Pig Starter:

The newest type of specialized pig feed is pig starter, which is made to fit nutritional requirements for very young pigs, using ingredients known to be very palatable. Use 2½% dehydrated alfalfa in such feed.

Pig Meal or Pig and Sow Meal:

This will contain 5% to 7½% dehydrated alfalfa.

Complete Sow Feed or a Gestation and Lactation Feed:

These need 5% alfalfa. The more concentrated feeds should have larger amounts of alfalfa. A pig and sow supplement containing 35% to 37% protein may well contain 20% to 25% dehydrated alfalfa meal. It would probably be too dusty in ground form and therefore is most useful pelleted.

Pasture Supplements:

Usually around 40% protein, these contain 5% to 15% alfalfa. The cheaper feeds contain small amounts of alfalfa and the better quality supplements contain dehydrated alfalfa to the extent of 10% or over. It makes the supplement safer to use nutritionally, increases its color and makes a better textured feed. Proper use of dehydrated alfalfa makes these supplements of the right texture and palatability so that free choice self feeding is fully satisfactory.

For Cattle Feeds

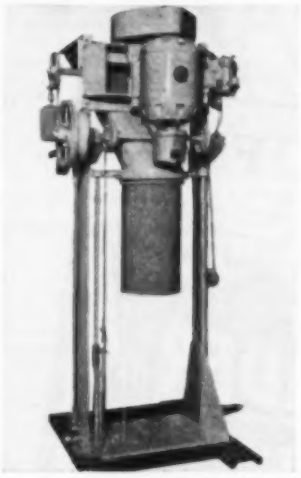
The need for carotene (pro-Vitamin A) is the major reason for using dehydrated alfalfa in feeding cattle or dairy cows. The amount to use in the formula will be such that an 800 to 1,000 lb. animal will get 1 lb. high grade dehydrated alfalfa a day. This will furnish minimum needs adequately. If your cattle supplement is to be fed at the rate of 4 lb. a day, to cattle receiving roughage containing no carotene at all (corn cobs, stover, straw or brown hay) then the supplement should contain 25% dehydrated alfalfa. The same principle applies to dairy feed. As a rule it is only when excessive rainfall, or extreme drouth has ruined the quality of the roughage that we need to put over 10% dehydrated alfalfa into dairy feed. When dehydrated alfalfa is put into a dairy or steer feed it is used for nutritional reasons, and not as a roughage. Many good dairy feeds contain dehydrated alfalfa as a protection to the animals in case the hay or silage is of mediocre quality.

For Sheep Feed

The minimum carotene need, expressed as vitamin A units, is about 1000 I.U. per 100 lb. live weight per day. This is very similar to cattle. For reproduction appreciably more needs to be supplied. A sheep or lamb feed or supplement to be fed at the rate of 1 lb. a day per 100 lb. live weight, will do a good job when it contains 4% to 5% of dehydrated alfalfa. If fed at the rate of ½ lb. a day then use 7½% to 10% dehydrated alfalfa, and if it is designed to be fed at ¼ lb. a day then use 15% to 20% dehydrated alfalfa.

For Horse Feed

Horses also have carotene requirements similar to that of cattle or sheep on a body weight basis of about 1.5 mg. carotene per 100 lb. live weight per day. For reproduction and lactation about three times this amount should be allowed. Usually the roughage furnishes the carotene, but if the roughage is devoid of carotene then 1 lb. high grade dehydrated alfalfa a day (45 to 50 mg. carotene a lb., equivalent to 75,000 to 83,000 I.U. a lb.) will take care of a 1,000 lb. to 1,200 lb. mare in gestation or lactation. About one third that amount will suffice for growing foals or mature work horses.



Model 35 Packer. Jacket Furnished If Required.

BARNARD & LEAS

All Electric High Speed Packer

This is an All Electric High Speed Packer, extensively used in packing Alfalfa Meal and Ground Alfalfa. All metal construction, and *dust tight.*

It is the finest Auger Packer obtainable.

We also manufacture a superior dust and oil tight all metal Packer for line shaft drive or individual motor and "V" Belt drive.

We make a complete line of Feed Mill and Elevator equipment.

For Full Particulars Write, Wire or Phone

BARNARD & LEAS MFG. CO., INC.

CEDAR RAPIDS, IOWA

You Voted For Your Favorite Candidates November 4 —

NOW VOTE FOR THE YEAR-ROUND FAVORITES

SQUARE FARE DE-HY **DAWSON'S** American Dehydrators Association

- [X] Dehydrated Alfalfa Pellets
- [X] Dehydrated Alfalfa Meal
- [X] Suncured Alfalfa Pellets
- [X] Suncured Alfalfa Meal

DAWSON COUNTY FEED PRODUCTS, Inc.

LEXINGTON, NEBRASKA • Phone 144 - TWX 992

ROUTE YOUR ADVERTISING

As You Route Your Salesmen

Feedstuffs:

- Complete, up-to-the-minute news coverage of the entire field facilitated by an interoffice teletype system.
- Market facts by special correspondents and staff members all over the U. S. including authoritative trade news interpretation from its Washington correspondent.
- More than 400 individual market quotations on feeds in each issue.
- Outstanding features devoted to feed dealers' and manufacturers' business operations—animal nutrition—feed store operations—bookkeeping—new sales techniques—merchandising methods—store displays—tested selling ideas.

Feedstuffs—the only weekly newspaper for the feed manufacturer, jobber, broker and dealer—gives its readers vital information about the products they use, buy and sell. In addition to its paid circulation—largest in the field—selective controlled trade coverage provides concentration in the territory you want to reach. Complementing the coverage regularly provided by paid subscriptions, additional mailings are made on a weekly rotation schedule blanketing each of the four geographic divisions of the United States: Northeast, Southeast, Southwest and Northwest.

You can route your advertising to reach one or more of these specific geographic distributions. This plan of selective controlled trade coverage is fully explained in an analysis of circulation showing the distribution in each classification of the feed industry, by states and geographic sections. A folder describing this coverage, "Occupational Breakdown According to Sectional Distribution," is available by writing to Feedstuffs.

THE MILLER PUBLISHING CO.
The Businesspaper Family Serving the Related Fields of
Flour, Feed, Grain and Baking
THE NORTHWESTERN MILLER • FEEDSTUFFS
THE AMERICAN BAKER • MILLING PRODUCTION

FEEDSTUFFS

118 South Sixth St., Minneapolis 2, Minn.
BRANCH OFFICES: New York, Chicago, Kansas City, Toronto

USDA Predicts Sharp Decrease in Feeding of Sheep and Lambs

WASHINGTON — The number of sheep and lambs to be fed for the coming winter and spring market is expected to be considerably smaller than the number fed a year ago, the Bureau of Agricultural Economics reports. A few states may feed more lambs than a year ago, but the smaller lamb crop in the western states and the heavy slaughter of lambs during the past three months will cause general reductions.

In the Corn Belt, all states with two or three exceptions will feed about the same or fewer lambs. Lamb feeding in the West will be reduced, with both Colorado and California showing marked reductions. As a result of drouth, little wheat pasture is available in the southern Great Plains states where the number of lambs on wheat pastures will be sharply below even last year's low number. Less interest in lamb feeding this season stems from heavy losses incurred in last year's feeding operations on the part of many lamb feeders, failure of wheat pastures to develop and to higher costs of feed this year.

The 1952 lamb crop in the 13 western sheep states was the smallest on record. With increased lamb slaughter during August through October, the number of lambs available for feeding this fall and winter is smaller than last year, despite the smaller number of ewe lambs held back for flock replacements this year. Of the western states, the important sheep states of Texas and Wyoming had smaller lamb crops, as did Idaho, Arizona and Nevada. In all other western states, the 1952 lamb crop was larger than the 1951 crop.

Shipments Smaller

Shipments of sheep and lambs into the nine Corn Belt states for which records are available during July through October were 3% smaller than in the same months last year. Inshipments during the four months were smaller this year than last in Wisconsin, South Dakota and Nebraska, while the remaining six states showed increases.

In the Corn Belt, the number of lambs on feed will be smaller than a year ago. Two or three of the Corn Belt states may show more lambs on feed Jan. 1, 1952, than last year, but most of the states will feed about the same or a smaller number. Feed supplies are generally adequate in the Corn Belt.

The wheat pasture feeding areas of the Great Plains states have suffered from the extended drouth. Lamb feeding operations on wheat pastures will be very limited, with the number now on wheat pastures only about half of the number last year and only a small fraction of the number grazed during the 1946-47 season. Pasturing is largely limited to volunteer wheat in local areas in western Kansas, and most of the lambs will be moved before the first of the year. Native pastures and feed of all kinds are very short.

Decline General

In the West, lamb feeding will be down in most areas. Receipts of lambs into northern Colorado have been much smaller than a year ago. Lamb feeding in the Arkansas Valley is greatly reduced and it is not expected that many more lambs will be brought in. Inshipments into California for the months of August through October are 20% less than in 1951, with October showing the greatest drop. Other western states are expected to show decreases in the number fed this season, except Idaho and Utah where the number fed probably will be about the same or higher than last year. Lamb feeding in the North Platte Valley of eastern Wyoming and western Nebraska will be on a smaller scale than last year.

Feeder lambs from most of the western supply areas were generally of good weight and in good condition. In the Pacific Northwest, range feed conditions were favorable for lambs, and a high proportion reached slaughter weights. Feeder lambs from Texas have generally been in poorer condition due to shortage of range feed. Supplies of grain and hay are ample except in the drouth areas of the Southwest.

The price of feeder lambs on the Denver market for the week ended Nov. 1 was $20.75 cwt., compared with $32 a year earlier.

ADDING METHIONINE PAYS, TESTS INDICATE

MIDLAND, MICH. — Extensive feeding experiments by the Dow Chemical Co., Midland, indicate that supplementation of rations with synthetic amino acids such as methionine to give proper amino acid requirement of the animal is effective and economical.

In reporting on the experiments, Dr. Julius Johnson, from the Dow Agricultural Chemicals Laboratory, said at the recent California Animal Industry Conference that optimum results were obtained when methionine supplementation was in the range of ½ to 1 lb. ton. His data indicated that the supplementation of poultry and swine rations did not affect rate of growth but that it increased feed efficiency appreciably. In the case of broilers, the addition of about ½ lb. methionine to a ton of feed increased the return from $20 to $50 for 1,000 birds.

PROPER FEEDING IMPORTANT

Feeding low grade cattle means selling feed in a low priced steer; but buying cheap cattle cheap may allow a wide margin between cost and selling price to help with the profits, but the grower doesn't make as much. Proper finish for their type or grade is fundamentally important. This is the advice of the Michigan State College Department of Animal Husbandry.

"We grind 1800 tons of alfalfa with one set of

PACAL

HARD FACED HAMMERS"

says Jerry Strootman,
Manager, Rural Dehydrators,
Bird Island, Minnesota

"WE RUN 24 HOURS A DAY,

6 days a week, and steady production is mighty important to us," says Mr. Strootman.

"With our old hammers, we had to stop and turn corners every three days. With Pacal Hard Faced Hammers, it's only once a month . . . the best hammers we have ever used!"

Pacal Hard Faced Hammers and Hammer Clusters* will outperform all others in your hammermill. Let us quote you—send your mill specifications to Dept. HE-112.

* U. S. Patent No. 2607538

PAPER, CALMENSON & CO.

COUNTY ROAD B AND WALNUT ST., ADJOINING HIGHWAY 36
ST. PAUL 8, MINNESOTA, PHONE NE. 9456

ALFALFA HAY

Dehydrated Alfalfa Meal

Exclusive sales agents for "Vermalfa" brand dehydrated alfalfa meal, manufactured from choice selected alfalfa, high in protein and vitamin A.

SAN JOAQUIN VALLEY HAY GROWERS ASSN.
Tracy, California

the Percheron of Packaging

...CHASE MULTIWALL BAGS

Chase Multiwalls are "Built to TAKE it!" They're the work horse of packaging! They are easy to handle, stack, and palletize . . . easy to open and to empty. Furthermore, Chase Multiwall Bags are economical and sharply reproduce your brand name. Your Chase salesman is a thoroughly informed packaging expert. Check with him on Chase Multiwalls for the better packaging of your product.

Percheron Horses are famous throughout Europe for great strength and symmetry of line.

SINCE 1847

Multiwall Bags for FEED

for Better Bags...Better Buy Chase!

CHASE BAG CO. GENERAL SALES OFFICES: 309 W. JACKSON BLVD., CHICAGO 6, ILL.

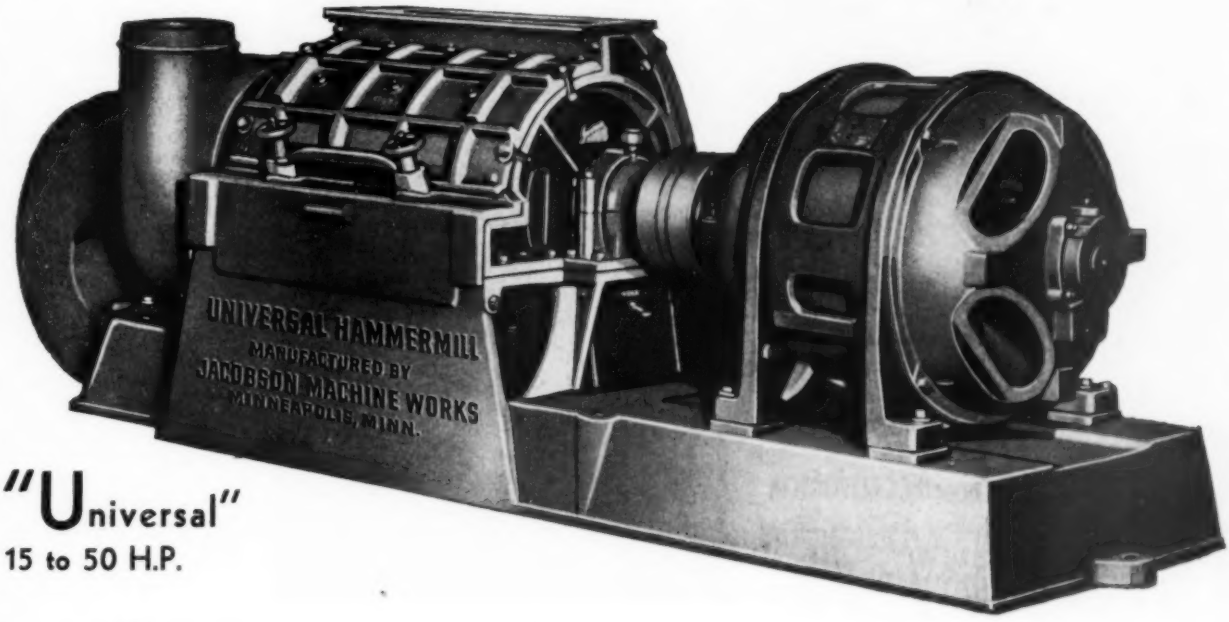
BOISE • DALLAS • TOLEDO • DENVER • DETROIT • MEMPHIS • BUFFALO • ST. LOUIS • NEW YORK • CLEVELAND • MILWAUKEE
PITTSBURGH • KANSAS CITY • LOS ANGELES • MINNEAPOLIS • GOSHEN, IND. • PHILADELPHIA • NEW ORLEANS • ORLANDO, FLA. • SALT LAKE CITY
OKLAHOMA CITY • PORTLAND, ORE. • REIDSVILLE, N. C. • HARLINGEN, TEXAS • CHAGRIN FALLS, O. • WORCESTER, MASS. • CROSSETT, ARK. • SAN FRANCISCO

Since 1910

Jacobson Grinders

are Exceptionally Efficient in

ALFALFA PROCESSING



"Universal"
15 to 50 H.P.

More tons per hour—
Less cost per ton—Since 1910

Jacobson "Universal" Hammermills are operating in many Alfalfa and other processing plants throughout the country. The experience of many years shows them to be exceptionally low in maintenance, repair and operating costs. At the same time they deliver more tons per hour. Screen changes are done in thirty seconds. A nail can be balanced head down on the housing when the mill is running at full capacity.—*The soft spoken giant of efficiency.*

Write for Bulletins

JACOBSON MACHINE WORKS

1076 Tenth Avenue S.E. ⊙ Minneapolis 14, Minnesota

A Bibliography of the Newest Alfalfa Literature

Here is a bibliography of recent literature dealing with alfalfa and its utilization. This is not a complete record but covers many of the major publications of scientific interest. The compilation was made by the American Dehydrators Assn., and supplements the list on these pages Nov. 17, 1951.

Aicher, L. C., Frank B. Kessler, and A. D. Weber. **Beef Cattle Feeding and Grazing Investigations for 1946-1947 . . . II. Comparative Values of Silage and Prairie Hay When Supplemented with Cottonseed Cake and with Ground Alfalfa for Wintering Yearling Replacement Heifers.** Kansas Circular 271, February, 1951.

Ayala, Enrique and Elton L. Johnson. **Vitamin B_{12} and Growth Inhibiting Properties of the Dried Juice of Alfalfa.** Poultry Science 30(6) 893, 1951.

Arizona Report 107. **An Investigation of Cattle Death Losses Occurring on Alfalfa, Alfalfa-barley and Barley Pastures.** (p.46) December 1951.

Arizona Report 107. **Feeding Tests to Determine the Relative Value of Different Cuttings of Arizona Alfalfa Hay for Milk Production.** (p. 60), December, 1951.

Ackerson, C. W., R. L. Borchers, and F. E. Mussehl. **Alfalfa in Chick Rations.** Nebraska 64th Annual Report (p.68) May, 1951.

Bird, H. R. **Use of Alfalfa in Poultry Rations.** Texas Nutrition Conf. (Abstracts of Papers) October, 1951 (p.26).

Baker, G. N., Carl Ervin, J. C. Adams, E. C. Conard. **Fattening Steers on Irrigated Brome-Alfalfa Pasture.** Nebraska 64th Annual Report (p.90) May, 1951.

Barnhart, C. E. **Protein and Vitamin Supplements for Growing-Fattening Pigs on Ladino Clover and on Alfalfa.** Journal of Animal Science 11(2) p. 233, 1952.

Beeson, W. M. and T. W. Perry. **Balancing the Nutritional Deficiencies of Roughages For Beef Steers.** Journal of Animal Science 11(3) p. 501, 1952.

Bert, M. H., H. H. Mitchell, F. M. Crawford and E. W. Lehmann. **The Comparative Nutrient Content of Field-cured and Barn-cured Alfalfa Hay.** Journal of Animal Science 11(2) p. 400, 1952.

Biddulph, C., G. Q. Bateman, J. R. Harris, F. L. Mangelson, F. V. Lieberman, W. Binnsand and D. A. Greewood. **Effect of Feeding Methoxychlor-Treated Alfalfa Hay to Dairy Cows.** Journal of Dairy Science 35(5) p. 445, 1952.

Blosser, T. H., F. R. Murdock, R. E. Lintott, R. E. Erb and A. O. Shaw. **The Use of Dehydrated Forages in Dairy Cattle Rations. II. Comparative Values of Finely Ground, Chopped and Pelleted Dehydrated Alfalfa as Grain Replacements for Lactating Dairy Cows.** Journal of Dairy Science 35(6) p. 515, June, 1952.

Borchers, R. L. and C. W. Ackerson. **Feeding Alfalfa Protein.** Nebraska 64th Annual Report (p. 70) May, 1951.

Borchers, R. L. and C. W. Ackerson. **Chemical Characterization of Alfalfa Nitrogen.** Nebraska 64th Annual Report (p. 70) May, 1951.

Borchers, R. L. and C. W. Ackerson. **Inhibitor in Alfalfa.** Nebraska 64th Annual Report (p. 70) May, 1951.

Brinegar, Merle J. and Donald R. Warner. **Antibiotic Studies with Swine in Dry Lot and on Alfalfa Pasture.** Journal Animal Science 10(4) 1041, 1951 (Abs. from Proceedings of American Society for Animal Production).

Burkitt, Wm. H., A. E. Flower, J. G. DePape and D. B. Watt. **Barley, Alfalfa, Bonemeal and Salt Compared with a Fortified Mixed Ration for Fattening Pigs Above Fifty Pounds.** Montana Mimeo. Circ. 60, July, 1951.

Campbell, J. E. and P. H. Phillips. **Reproduction Studies With Dogs. I. Effect of Corn-Soybean Meal-Alfalfa Diet.** Journal of Nutrition 47(4) p. 621, August, 1952.

Conard, E. C., T. W. Dowe, V. H. Arthaud, and L. C. Newell. **Grazing and Management of Brome-Alfalfa Pasture.** Nebraska 64th Annual Report (p. 92) May, 1951.

Cooley, Maxwell L. **Absorption Spectra of Dehydrated Alfalfa Meal Extracts and Standard Carotene Solutions.** J. A. O. A. C. 35(2) p. 487, May 15, 1952.

Cunha, T. J., S. J. Folks, H. D. Wallace and A. M. Pearson. **Supplemental Feeds for Sows During Reproduction and Lactation on Florida Pastures.** Florida A.E.S. Annual Report for 1950-1951 (p. 59).

Dolge, K. L., H. D. Eaton, J. E. Avampato, R. D. Mochrie and F. I. Elliott. **Effect of Feeding Various Percentages of Artificially Dehydrated Alfalfa Meal on the Growth and Carotene Intake of Dairy Calves.** Journal of Dairy Science 35(5) p. 424, 1952.

Draper, C. I. **Is Alfalfa Meal Economical Feed for Turkey Poults?** Utah Farm and Home Science 13(1) p. 6, March, 1952.

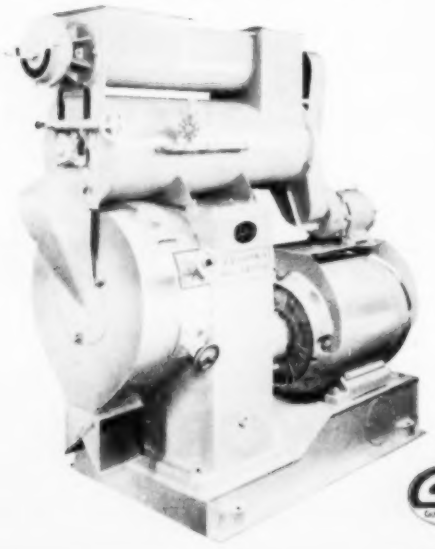
Eaton, H. D., C. A. Carpenter, R. Caverno, R. E. Johnson, and F. Elliott. **A Study of the Comparative Value of Dehydrated and Pelleted Alfalfa as a Source of Carotene and as Roughage for Young Dairy Calves.** Conn. Rpt. of the Station for 1949-50, December 1950 (Bulletin 271).

Eaton, H. D., K. L. Dolge, R. D. Mochrie and J. E. Avampato. **Field-Cured and Field-Baled Alfalfa Hay Versus Artificially Dried and Chopped and Pelleted Alfalfa Hays as a Source of Carotene and Roughage for Guern-**

More and More Alfalfa Pellets!

1200 tons of ¾" dehydrated alfalfa meal pellets produced on California Century Pellet Mills, ready for shipment.

– with the High-Capacity CALIFORNIA CENTURY "75"



More and more of these machines are being sold today for profitable pelleting of dehydrated alfalfa meal.

- ★ They show better operation, higher pellet quality!
- ★ Special CALIFORNIA-designed accessories and procedures simplify alfalfa pelleting, speed up pellet output!
- ★ Low power cost with big, direct-coupled 75 hp motor—delivers the most pellets per horsepower!

Investigate all the advantages of pelleting alfalfa with this new, highly specialized equipment. Write for full details.

CALIFORNIA PELLET MILLS

CALIFORNIA PELLET MILL COMPANY
1800 Folsom St., San Francisco 3, California
1114 E. Wabash Ave., Crawfordsville, Indiana
1728 Grand Avenue, Kansas City 8, Missouri

SALES AND SERVICE ALSO IN: ATLANTA • BUFFALO • DENVER • FORT WORTH • MINNEAPOLIS • OMAHA • SEATTLE • ST. LOUIS

sey and Holstein Calves. Journal of Dairy Science 35(2) 98, 1952.

Faris, Loyd M. **Dehydrated Alfalfa; Its Values and Use in Feeds.** Feedstuffs 25(20) p. 30, May 17, 1952.

Galgan, M. W., M. E. Ensminger, B. H. Schneider, J. L. Schwendiman, and J. K. Patterson. **Fattening Steers on Grass and Grass-Alfalfa Pasture Supplemented with Concentrates.** Washington Stations Circular 164, September, 1951.

Garrigus, W. P. **Digestible Nutrient Contents of Corn, Bluegrass, Alfalfa, Ladino, Fescue, and Soybean Silages for Steers.** Kentucky Bulletin 573, December, 1951.

Garrigus, W. P. **Alfalfa and Bluegrass Silages as Roughages for Fattening Steers in Drylot.** Kentucky Bulletin 579, December, 1951.

Hauge, S. M., E. T. Mertz, J. W. Needham and V. L. Singleton. **Sulfur Deficiency in Soil Affects Legumes.** Indiana 64th Annual Report, 1950-51, June, 1951 (p. 3).

Hentges, J. F., Jr., R. H. Grummer, P. H. Phillips and G. Bohstedt. **Carotene Requirements of Growing Pigs Are Measured.** Wisconsin Bulletin 492, Annual Report, Part Two, June, 1951 (p. 42).

Hillier, J. C. and C. K. Whitehair. **The Effects of Adding Soybean Meal, B-Vitamins, and Alfalfa Meal to a Corn, Mineral, and Antibiotics Diet for Young Pigs.** Oklahoma MP-27 (p. 38) June, 1952.

Huffman, C. F., S. T. Dexter, and C. W. Duncan. **Coefficients of Digestibility of Immature Alfalfa, Ladino Clover, Timothy and Quackgrass Hays.** Michigan Quarterly Bulletin 35(1) p. 16, August, 1952.

Irvin, H. M., J. C. Shaw, P. Saarinen and L. A. Moore. **Net Energy Vs. T.D.N. in Evaluating the Efficacy of an All-Alfalfa Hay Ration for Milk Production.** Journal Animal Science 10(4) 947, 1951.

Jensen, Leo S. and James McGinnis. **A Comparison of Feeding Pelleted and Unpelleted Diets Containing Different Levels of Alfalfa to Laying Hens.** Poultry Sci. 31(2) p. 307, 1952.

Johnson, R. E., F. I. Elliott, H. D. Eaton, and G. H. Porter. **The Utilization of Dehydrated and Pelleted Alfalfa as a Feed for Dairy Cattle.** Conn. Annual Report 1949-1950, Bulletin 271, December, 1950 (p. 23).

Kingsley, A. L. and Kenneth Anderson. **Sulfur Content and Proteins of Alfalfa.** North Dakota Annual Report (p. 45) 1950-1951, January, 1952.

Metabolism of Nitrogen in Alfalfa. Kentucky 63rd Annual Report (p. 11) 1949-50.

Effect of Corn-Alfalfa Hay Ratio on the Digestibility of the Different Nutrients by Sheep. Kentucky 63rd Annual Report, 1949-1950 (p. 40).

Marion, P. T., J. H. Jones and C. E. Fisher. **Cattle Feeding Studies at the Spur Station, 1950-1951.** Texas Progress Report 1402, September, 1951.

Measuring the Nutritive Value of Alfalfa Hay. Maryland Station Bulletin A-67, 64th Annual Report (p. 41) 1950-1951.

McKellar, E. K. **Better Dairy Feeding.** Flour & Feed, February (p. 34) 1952.

Neale, P. E. and Marvin Koger. **Combinations of Corn Silage and Coarse Alfalfa Hay for Fattening Lambs.** New Mexico Bulletin 369, April, 1952.

Nelson, A. B., A. E. Darlow, R. W. MacVicar, and W. D. Campbell. **The Relative Value of Alfalfa Hay and Cottonseed Cake for Winter Feed in a Commercial Cow Herd.** Oklahoma Misc. Pub. 27, June, 1952 (p. 29).

Cubes Coarse Alfalfa Hay Appears Promising. New Mexico 61st Annual Report (p. 6) 1949-1950, January, 1951.

Corn Silage in Lamb-Fattening Rations. New Mexico 61st Annual Report (p. 6) 1949-1950, January, 1951.

Cubing Increases Profits from Low-Grade Alfalfa Hay. New Mexico 62nd Annual Report (p. 10) 1950-1951, February, 1952.

Wethers in Dry Lot Gain Best on Self-Fed Alfalfa Cubes. New Mexico 62nd Annual Report 1950-1951 (p. 11) February, 1952.

Calves on Good Alfalfa Need No Extra Carotene. New Mexico 62nd Annual Report (p. 13) 1950-1951, February, 1952.

Pumpelly, C. T., H. L. Mitchell, and Ralph E. Silker. **Determination of Carotene in Alfalfa Meal.** Journal of Association of Official Agricultural Chemists. 34(4) p. 821, 1951.

Severson, G. M. and E. V. Staker. **Alfalfa Studies.** Nebraska 64th Annual Report (p. 85) May, 1951.

Sprague, V. G., P. S. Williams, C. B. Knodt, E. M. Kesler, and A. L. Haskins. **Five Legume-Grass Associations for Silage and Aftermath Grazing for Dairy Cows.** Pennsylvania B. 555, August, 1952.

Steward, F. C., J. F. Thompson, F. K. Millar and M. D. Thomas. **The Amino Acids of Alfalfa as Revealed by Paper Chromatography With Special Reference to Compounds Labeled with S35.** Plant Physiol., 26, 123-135, 1951.

Hulls and Alfalfa in Steer Rations. Texas Agricultural Research, 1950 (p. 8).

Dehydrated Alfalfa Leaf Meal for Poultry. Texas Agricultural Research (p. 58) 1950.

Improvement of Bulky, High-Fiber Laying Mash by Pelleting. U.S.D.A. Report of the Bureau of Animal Industry, 1951 (p. 30).

Stock Poisoning by Plants. U.S.D.A. Report of Chief of the Bureau of Animal Industry, 1951 (p. 47).

Van Horn, J. L., Wm. H. Burkitt, A. E. Flower, James Drummond, Art Hoversland. **Value of Dehydrated Alfalfa for Growth, Wool Production, and Reproduction in Sheep.** Montana Mimeo. Circ. 62, Progress Report for 1950-1951, Jan. 1952.

Vestal, C. M. and G. O. Mott. **Alfalfa Ladino Clover as Pasture for Growing and Fattening Hogs.** Purdue Swine Day, Proceedings, September, 1951 (AH-66).

Vestal, C. M. **Comparing Ladino Clover Meal and Alfalfa Meal in Gestation Rations for Sows.** Purdue Swine Day (Proceedings) September, 1951 (AH-64).

Weber, A. D., L. C. Aicher, and Frank B. Kessler. **Beef Cattle Feeding and Grazing Investigations for 1946-1947 . . . III. Comparative Values of Different Quantities of Cottonseed Cake, Ground Grain, and Ground Alfalfa When Fed Singly and in Combination as Supplements to Silage in Winter Rations for Stock Cattle.** Kansas Circular 271, February, 1951.

Sheep Gain Most From Crested Wheatgrass-Alfalfa Pasture. Wyoming 61st Annual Report (p. 6) 1950-1951.

FROM THE HEART OF THE ALFALFA-LAND COMES—

PAST-UR-LIKE

TRADE MARK

THE BRAND WITH THE PATENT PROCESS

Here are 10 reasons why **Past-ur-like** *is better than ordinary alfalfa*

1. **No dust.**
2. **Reduced fire hazard.**
3. **Less storage and shipping space required.**
4. **Can be handled like grain.**
5. **Direct feeding possible.**
6. **More palatable.**
7. **Consistent quality control.**
8. **Properly cooled, sacked and stored at atmospheric temperature.**
9. **Coarse shredded pellet provides roughage for ruminants.**
10. **Retains more of the natural nutrient values of alfalfa for a longer period.**

PAST-UR-LIKE Products Are Manufactured Under a Patent Process for Proper Preparation

In this process the alfalfa is harvested at a stage when it contains the highest nutrient values. The fresh alfalfa is chopped coarse and fed uniformly into a stem-splitting machine .This properly prepares the material for drying because it exposes the inner moisture of the stems, which makes it possible for it to dry faster at much lower temperatures. The product is protected from temperatures that normally destroy carotene and other nutrient values, and the material is uniformly dried.

It then goes to the foreign material separator en route to the pellet machine, still in coarse form. Special elevating equipment is used in order not to break up the product. The elevator takes the pellets into the cooling unit, where the product is thoroughly cooled to a normal atmospheric temperature. At this point, PAST-UR-LIKE is ready for sacking or loading in bulk.

U. S. ALFALFA PRODUCTS CO.

P. O. Box A VERDON, NEBRASKA Phone 2191

Creeping Alfalfa Holds Promise as Companion of Range Grasses

WASHINGTON—Recent reports on legumes to grow with grasses to improve grazing on the Great Plains show there is much promise in creeping alfalfas brought in from several parts of the world, according to an agronomist of the U.S. Department of Agriculture. The development of different strains of this type adapted to various areas, he says, could greatly increase the yield of livestock feed on much of the 200 million acres of range pasture.

What is needed in this grazing country, says Dr. O. S. Aamodt, is "a legume associate for grasses that can persist in the face of hard climatic and grazing conditions, and provide additional nitrogen, now a limiting pasture factor. In the original cover of this vast area there were native legumes that balanced the grasses under the easy demands of the buffalo and antelope, but these plants lost their hold under the grazing of cattle and sheep. Now these native legumes do little for thickness of turf or nutritive quality of the forage.

"The creeping alfalfas have grown in various parts of the world for centuries. One of the first to attract attention here was brought from Siberia by Prof. N. E. Hansen of South Dakota, but it was overlooked for many years, until the 1940's. It had been increased and spread to many farmers for trial in the Northern Great Plains, but practically disappeared."

Plants Hardy

A check during the past year or so, says Dr. Aamodt, showed that "after years of drought, hot summers, cold winters, overgrazing and cropping, many of the hardy plants still flourished." Some packets of Hansen's early seed taken to the U.S. Northern Great Plains Field Station at Mandan, S.D., in the early 1900's were found, and tests showed 50% germination.

The persistence of these plants and the long life of their seed indicate to Dr. Aamodt the possibility of a successful grazing alfalfa. Seed supplies are now being increased at several stations for further tests.

Another creeping alfalfa, brought to Oregon from Wisconsin many years ago, and said to have been one of a number of seed-company introductions from Siberia, has proved to be hardy and with possibilities as a range forage. Now it is a commercial variety officially named Nomad, and limited quantities of seed are sold.

A field of creeping alfalfa, planted in Alaska during gold rush days, was brought back to notice in 1946, the last crop plants of any kind surviving on what had been a federal experiment station at Rampart up to 1924.

Research Underway

Dr. Aamodt reports work done on this type of alfalfa in Canada and in other northern countries—some European varieties as far north as Tromso, Norway; some promising selections in South America, notably Uruguay, under conditions similar to those of the southern Great Plains. Several strains with promise for the plains are being tried out in approximately 20 western states by state and federal research men.

Twenty years ago in dry, denuded goat pastures of Turkey a USDA explorer, Harvey Westover, found a creeping alfalfa. Also some were found wild in Greece, Spain, and elsewhere, mostly along roadsides, in fence rows and in overgrazed pastures, usually growing with grasses and annual legumes. About the same time a creeping alfalfa of unknown origin was found on a golf course at Des Moines, Iowa, where it had stood close mowing for at least five years.

Promising plants of this kind were added to the federal-state collection in Nebraska. Combining various strains, the breeders have produced several new ones that seem to have what is needed in a successful legume to go along with the Great Plains grasses.

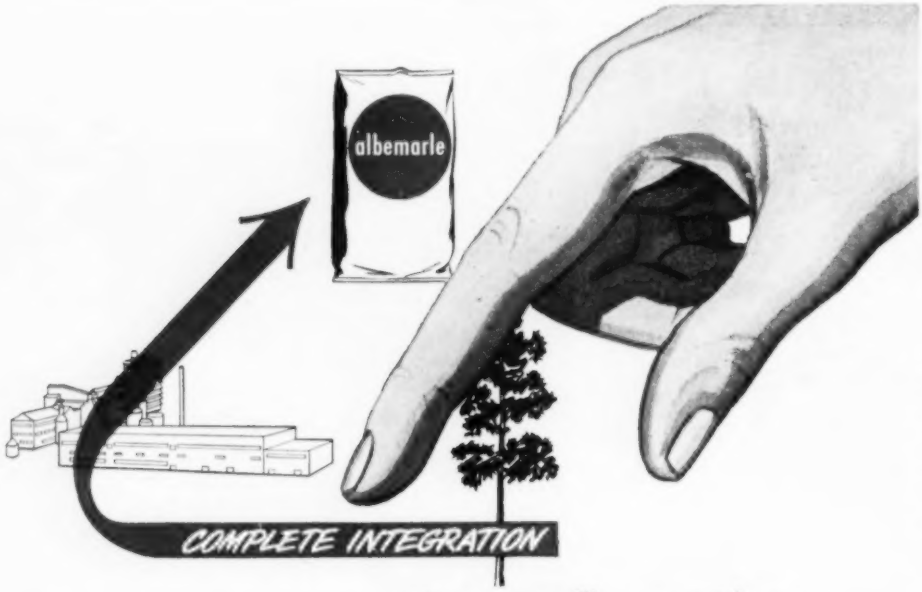
Dehydrated and Suncured

ALFALFA MEALS

WARD FEED CO.

HOME OFFICE: 2274 Board of Trade, Chicago 4, Ill.—WAbash 2-1803
BRANCH OFFICES: 408 Corn Exchange, Minneapolis 15, Minn.—FIlmore 2783
406 Merchants Exchange, St. Louis 2, Mo.—MAin 9468

Brokers of *Top Quality*...
ALFALFA MEAL
IVAN SCANLAN & CO.
114 Portland Ave., Minneapolis 1
MAIN 6421 *TWX MP-495*



Three color effects economically

Albemarle's facilities for color matching Kraft stock are extensive. Making background a colorful part of overall design can achieve three color effects with only two color printing. Contrasting or matching tapes add further eye appeal.

at your finger tips . . .

Because the Albemarle Paper Manufacturing Company's Multiwall mills are a completely integrated operation, the entire process is at our customers' finger tips. Albemarle grows its own pulp wood, makes, colors and prints its own Kraft paper, makes Multiwall in many plies.

Customers have learned how valuable an asset complete integration is to them . . . how valuable it is to deal with a company large enough to handle even the largest order . . . yet sufficiently "flexible" to help customers take care of the unexpected.

Investigate Albemarle. Many customers have cut bag costs after a "planning conference" with an Albemarle representative.

FOR *Multiwall* CALL *Albemarle*

ALBEMARLE PAPER MANUFACTURING COMPANY • RICHMOND, VA. • PHONE 2-9061

NEW YORK 21 West St., HAnover 2-4645 PHILADELPHIA 123 S. Broad St., Kingsley 6-3616 BALTIMORE 32 South St., LExington 3552
CHICAGO 1707 Daily News Bldg., 400 W. Madison St., RAndolph 6-3519 MINNEAPOLIS 1122 Flour Exchange Bldg., BRidgeport 1352
LOUISVILLE 120 N. 10th St., CLay 1476 BUFFALO 121 Center St., East Aurora, N. Y., Telephone 1269

ELK VALLEY ALFALFA MILLS
Division—MIDLAND INDUSTRIES, INC.
INDEPENDENCE, KANSAS
Elk Valley Dehydrated
ALFALFA MEAL
Dehydrators • Blenders

Use FEEDSTUFFS Want Ads for RESULTS

EAST or WEST

CENT-O-GREEN DEHYDRATED ALFALFA MEAL is always the same—regardless of season—regardless of the section of the country. Now, East and West are efficiently served by Central Mills, Incorporated, by their plants in Ohio and newly completed plants in Nebraska.

The quality of CENT-O-GREEN DEHYDRATED ALFALFA MEAL alone is constant, uniform, and unchanging because Central Mills' special FORMULATED BLENDING and rigid SCIENTIFIC LABORATORY CONTROL guarantee uniform quality at all times in all seasons.

GUARANTEED ANALYSIS—LABORATORY TESTED
Crude Protein not less than 17.0 Per Cent
Crude Fat not less than 1.5 Per Cent
Crude Fibre not MORE than 27.0 Per Cent
Nitrogen Free Extract not less than CARBOHYDRATES 35.0 Per Cent
cent-O-green
100 LBS NET
DEHYDRATED ALFALFA MEAL
CENTRAL MILLS INC.
DUNBRIDGE, OHIO

Look for this CENT-O-GREEN tag on the dehydrated alfalfa meal that you buy—it's your proof positive of uniform high quality alfalfa meal.

CENTRAL MILLS, Incorporated

MAIN OFFICE AND LABORATORY AT DUNBRIDGE, OHIO

Operating Plants at Cygnet, Ohio; West Liberty, Ohio; Yoder, Arkansas; Wynnewood, California; Gibbon, Nebraska; Alda, Nebraska and Callaway, Nebraska

Not Everything Is Work

ALFALFA INDUSTRY evils were lampooned in this convention skit on the program at Colorado Springs in 1950. The actors are, left to right: Ralph Biermann, Don Stewart, Thomas Spencer and Ed Cherbonnier.

Dehydrators Mix Business and Play When They Attend Conventions

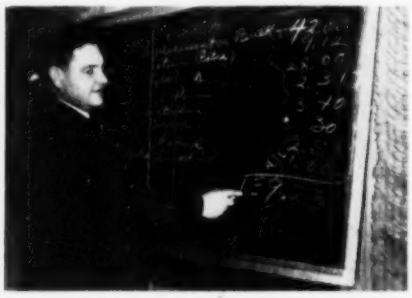
While problems of the alfalfa industry always get serious consideration at American Dehydrators Assn. conventions, these meetings are accented by good fun and fellowship. The Colorado Rockies, Texas Gulf Coast, Florida and the Carribean—these vacation areas have furnished the setting for recent ADA conventions. Because most ADA members have adopted the annual convention time as vacation time, many wives and children accompany the men to the meetings and take part in the special entertainment features and extra festivities. A typical ADA convention is about equally divided between business and pleasure. The 1953 meeting, to be held in the Valley of the Sun near Phoenix, Ariz., is another which will provide entertainment and diversion for the entire family. These pictures illustrate a few of the entertainment high spots and leisure moments at ADA conventions in the past.

RETIRING prexy Joe Chrisman, decorated with fishing rod and reel presented to him at the St. Petersburg convention in 1952.

THE COCKTAIL PARTY at the Chicago convention in 1948 drew a large crowd.

GOOD FOOD and plenty of it has always been a feature of the association conventions.

ALFALFA had the spotlight at an Ice Palace Show in Colorado Springs during the 1950 convention.



A FAMOUS dehydrators' convention speech was made by Dr. Jake Hunter in St. Louis in 1949 when he presented a balance sheet on the dollar values of alfalfa.

TWO MEMBERS of the ADA from England were welcomed at the Galveston convention in 1949. Left to right, are Neil Waldo, H. O. Crouch (from England), Erwin Burkholder, D. C. H. Crouch (from England) and John Schiller.

A STYLE SHOW entertained the ladies at the Tides Hotel, St. Petersburg, Fla., during the 1952 meeting of the dehydrators' association.

WITH THE ROCKY MOUNTAINS as a backdrop, the Texas delegation is shown at the 1951 meeting at the Broadmoor Hotel in Colorado Springs.

THE ADA TENTH anniversary was marked by impressive ceremonies at St. Petersburg, Fla., at the 1952 convention. Here the first president of the association, Don Merrick, is shown lighting the first 10 candles on the ADA birthday cake.

AN EARLY convention shot. W. J. Small is interviewed for a radio show at St. Louis in 1946.

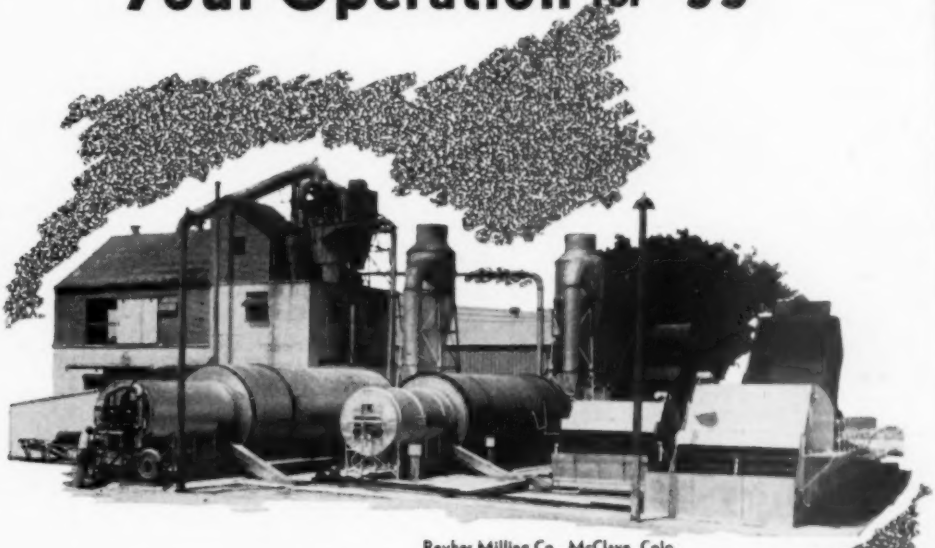
"HOT" ALEXANDER, left, and other Texas dehydrators made secretary Lloyd Larson a full-fledged cowboy at Galveston in 1949.

FEMININE charm is always evident at ADA conventions. Dehydrator Ken Servatius greeted his daughter who was in the Ice Palace Show at Colorado Springs in 1950.

NOW IS THE TIME

TO EXPAND

Your Operation for '53



Reyher Milling Co., McClave, Colo.

Assure Profitable Production with McGehee DRYERS

Prospects were never brighter for profitable production of Dehydrated Alfalfa in 1953. No other drying equipment will do more than McGehee plants to assure you the utmost in efficient, economic production. That's why prominent producers all over America look to McGehee Company as the leading designer and builder for specific drying needs.

The Leader in Alfalfa Drying

McGehee Company

616 E. FIRST ST.

KANSAS CITY, MISSOURI

look to a member

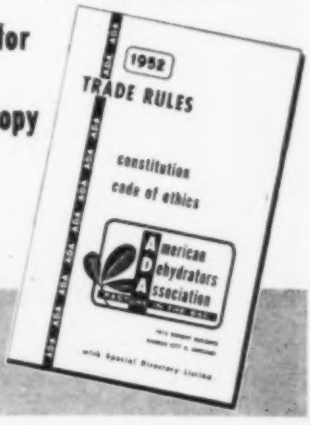
member ADA American Dehydrators Association
PASTURE IN THE BAG

Membership in the ADA is both a privilege and an obligation. Members voluntarily impose upon themselves high ethical standards. They have made splendid progress in standardizing their products and selling methods. They have adopted Trade Rules* to govern all transactions. These members contribute to ADA research aimed at the growing of better alfalfa, improved processing and better feed utilization—research that benefits the feed manufacturer and consumer alike. It is *good* business to *do* business with those who have the best interests of *your* business at heart!

for a reliable source of DEHYDRATED ALFALFA

ARIZONA	
Casa Grande	Borg Mills
Phoenix	Arizona Flour Mills
ARKANSAS	
Blytheville	Rich Land Products Co.
Driver	Lowrance Bros. & Co., Inc.
Hughes	Horseshoe Milling Company
Osceola	Ohlendorf Milling Co.
CALIFORNIA	
Dixon	Dixon Dryer Co.
Firebaugh	V. C. Britton Company
Escalon	A & G Meal Co.
Holtville	Holtville Alfalfa Mills, Inc.
Los Angeles	Fernando Alfalfa Mlg. Co.
Madera	Kerman Alfalfa Dehy. Co.
Red Bluff	Minch's Wholesale Meats
Tracy	San Joaquin Valley Hay Growers Assn.
Woodland	C. M. Brubaker & Sons
COLORADO	
Lamar	National Alf. Dehy. & Mlg. Co.
McClave	The Reyher Milling Co.
Milliken	Colorado Alfalfa Products Co.
Sterling	Sterling Alfalfa Products
Wiley	Ark. Valley Alf. Mlg. Co., Inc.
FLORIDA	
West Palm Beach	Indian Trail Ranch, Inc., P.O. Box 6866
ILLINOIS	
Paxton	Paxton Alfalfa Corp.
Roanoke	Prairie Dehydrating Co.
INDIANA	
Fort Wayne	T. E. White Co.
New Paris	Dwiggins Alfalfa Mills
Rushville	Rush County Alfalfa Dehydrating Coop., Inc., Box 264
IOWA	
Conrad	Green Products Co.
Iowa City	Iowa Valley Milling Co.
Lake Park	Arco Dehydrating Co.
Laurel	Paul Bros. Seed & Feed Co.
Sloan	Wraybill Dehydrating Co., Inc.
KANSAS	
Abilene	Abilene Alfalfa Mills, Inc.
Concordia	Harry M. Liggett Co., Inc.
Hutchinson	The Ark Valley Alf. Mills, Inc.
Independence	Elk Valley Alfalfa Mills
Junction City	Junction City Dehy. Co., Inc.
Lakin	Evergreen Dehydrating Co.
Lawrence	Ramsey Dehydrating Co.
Maize	Bert & Wetta
Manhattan	Eureka Lake Alfalfa Co.
Neodesha	The W. J. Small Co., Division Archer-Daniels-Midland Co. Sales Office, Kansas City, Mo.
Oxford	The Nelson Alfalfa Mills, Inc.
Syracuse	Western Dehydrating Co.
Topeka	Jones Alfalfa Milling Co.
	Kaw Dehydrating Co.
	Koelling-Thompson Dehy. Co.
	Progress Products Co.
Winfield	Southwestern Alfalfa Mills
LOUISIANA	
Shreveport	Caplis Farm Dehy. Co., R.R. 3
MICHIGAN	
Blissfield	Ireland Alfalfa Mills
	Piehl's Alfalfa Mill
Erie	Erie Alfalfa Mills, Inc.
MINNESOTA	
Bird Island	Rural Dehydrators
Crookston	Red River Alfalfa Co.
Luverne	Paulson Dehy. Products Co.
Olivia	Northern Drying Co.
Swift	Landby Dehydrating Co.
Worthington	Worthington Dehydrating Co.
MISSOURI	
Carrollton	Carrollton Processing Co.
Charleston	Dehydrators Supply Co.
Hannibal	Marion County Milling Co.
Kansas City	Cerophyl Laboratories, Inc. 2438 Broadway
Levasy	Levasy Dehydrating Co.
Odessa	C. E. Carter Co.
St. Louis	Ralston Purina Co.
NEBRASKA	
Arlington	Arlington Dehydrator Co.
Burwell	Loup Valley Alfalfa, Inc.
Columbus	Al-Fa Meal Company
Cozad	Allied Mills, Inc.
	Haymaker Feeds, Inc.
	L & L Mlg. & Dehy. Co.
	Nebraska Farm Products, Inc.
Dakota City	Beermann Brothers Dehy.
David City	David City Alfalfa Co.
Fremont	Dehy. Alfalfa Mills, Inc.
Gibbon	D. E. Merrick & Company
Gothenburg	Healey Milling Company
Grand Island	Cornhusker Farms
Hastings	Morrison & Quirk
Herman	Herman Alfalfa Milling Co.
Kearney	Kearney Alfalfa Mills
Lexington	Central Alfalfa, Inc.
	Dawson County Feed Products
	Nebraska Alfalfa Farms, Inc.
	Platte Valley Products, Inc.
Mead	Mead Alfalfa Milling Co.
Minden	Trico Feed Mills
Monroe	Monroe Grain & Alfalfa Co.
North Platte	Birdwood Products Co.
Odessa	Odessa Alfalfa Mills, Inc.
	Shofstall Hay & Milling Co.
Schuyler	F. J. Higgins Milling Co.
Scribner	Ebel Alfalfa Mills
Tekamah	Dehydrated Products Co. & Burt County Mills, Inc.
West Point	West Point Feed Products Co.
Willow Island	Willow Products Co.
Wisner	Albers Dehydrating Co.
NEW MEXICO	
Roswell	AAA Alfalfa Milling Co.
NEW YORK	
Avon	Genessee Valley Alfalfa Corp.
NORTH CAROLINA	
Wake Forest	The Welles Company
NORTH DAKOTA	
Granville	Big Sky Dehy., Inc.
Mayville	Haugen Dehydrating Company
OHIO	
Bradner	Portage Valley Milling Co.
Dunbridge	Central Mills, Inc.
Graytown	Rohloff Brothers, Inc.
New Bavaria	Schwab Brothers Mills, Inc.
New Bremen	Bremco Alfalfa Mills, Inc.
Oak Harbor	Hayward, Inc.
Ohio City	MHR Alfalfa Co.
Toledo	The A. B. Caple Co.
	Ireland Alfalfa Mills
OKLAHOMA	
Dewey	Dewey Alfalfa Dehydrating Co.
Muskogee	Choska Alfalfa Dehy. Mills
	Cole Grain Company
Pauls Valley	Glenbar Farms
PENNSYLVANIA	
Allentown	Trexlar Farms
Martinsburg	Cove Dehydrating Plant
Nazareth	Green Acre Farms
	Keystone Dehydrators
	Sunny Slope Farms, Inc.
SOUTH DAKOTA	
Menno	Far Alfalfa Company
Vermillion	Sioux Alfalfa Meal Company
TENNESSEE	
Memphis	Nickey-Eason Plantations, Inc.
Tiptonville	Reelfoot Alfalfa Mill
TEXAS	
Brookshire	Brookshire Alfalfa Mills
Brownwood	Bag-O-Green Milling Co.
Calvert	Anderson Dehydrating Co.
Garwood	Garwood Dehydrating Co.
Hearne	Brazos Valley Dehydrating Co.
	Hearne Alfalfa Milling Co.
	Plantation Dehydrating Co.
Kaufman	Star Brand Cattle Co.
McAllen	Chlorophyll Chemical Corp.
Mumford	Mumford Alfalfa Milling Co.
Raymondville	Evergreen Farms, Inc.
Sherman	Grayson Alfalfa Dehy. Mills
Sugar Land	Sugarland Industries
Vernon	Greenbelt Dehydrating Co.
Wharton	Texophyl Products
UTAH	
Ogden	Farmers Grain Cooperative
WASHINGTON	
Burlington	Chris Knutzen & Co.
Mount Vernon	Pierson Dehydrating Co.
	Skagit Dehydrators
Snohomish	Floyd McKennon
Touchet	Ahlquist Dehydrator Co.
WISCONSIN	
Fountain City	Joseph S. Greshik
Sussex	Mammoth Spring Canning Co.
CANADA (BRITISH COLUMBIA)	
Chilliwack	Springbank Dehydration, Ltd.
ONTARIO	
Woodstock	Hillview Farms, Ltd.
Vancouver	Buckerfield's, Ltd.
ENGLAND (NORFOLK)	
Stoke Ferry	Crouch Dehydrators, Ltd.

*Write for Your Free Copy



AMERICAN DEHYDRATORS ASSOCIATION
1015 DWIGHT BUILDING **KANSAS CITY 6, MISSOURI**